

571

AATCTCATTCTCCTATGGT TATGGGGCGG GTCATTGATG CCATCACATC GGGGCAATTA	6540
ACCCAGCAGG ACCTCCTTCT TAGCCTATTT TACTTGCTAC TTGCAGCCTT TGGTATGTAC	6600
TATTTGCGCT ATGTGTGGCG TATGTATATC CTTGGGACCT CTTATTGCTT GGGACAGATC	6660
ATGCGGTCTC GCTTGTTTAA GCATTTTACA AAAATGTCGT CAGCCTTTTA TCAAACCTAT	6720
CGGACGGGTG ATCTGATGGC ACACGCAACC AATGATATCA ATGCCTTGAC TCGTTTAGCA	6780
GGTGGCGGTG TCATGTCTGC GGTGGATGCC TCTATCACGG CTCTGGTGAC TTTGTTGACC	6840
ATGCTCTTTA GCATCTCATG GCAGATGACT CTGTTGCCA TTCTCCCCCT ACCTTTTCATG	6900
GCCTATACGA CTAGTCGCCT AGGGAGAAAG ACTCATAAGG CCTTTGGCGA ATCCCAAGCT	6960
GCTTTTCTG AACTCAATAA CAAGGTACAG GAGTCCGTAT CAGGTATCAA AGTGACCAAG	7020
TCTTTCGGTT ATCAGGCAGA CGAGTTGAAG TCTTTCAGG CAGTCAATGA ATTAACCTTC	7080
CAAAAGAACC TGCAAACCAT GAAATATGAT AGTCTCTTTG ACCCTATGGT TCTCTTGTTT	7140
GTTGGTTCGT CCTATGTTTT AACGCTTTTG GTTGGCTCCT TGATGGTTCA GGAAGGGCAG	7200
ATTACAGTTG GGAATCTAGT CACCTTTATC AGCTATTTGG ATATGCTGGT CTGGCCTCTT	7260
CTGGCCATCG GTTTCCTCTT TAATACTACT CAGCGAGGGA AGGTTTCTTA CCAGCGGATT	7320
GAAAATCTTT TGTCTCAGGA ATCTCCTGTA CAAGACCCTG AGTTTCCTCT GGATGGTATT	7380
GAAAATGGGC GTTTGGAGTA TGCCATTGAC AGCTTTGCTT TTGAAAATGA GGAAACACTG	7440
ACGGATATTC ACTTTAGTTT GGCAAAAGGG CAAACACTGG GCTTGGTTGG GCAGACAGGC	7500
TCTGGGAAAA CGTCCTTAAT CAAGCTCCTC TTGCGTGAAT ACGATGTGGA TAAGGGTGCC	7560
ATTTATCTAA ACGGTCACGA TATTCGGGAC TATCGTCTGA CAGACCTTCG CAGTCTCATG	7620
GGCTATGTTT CTCAGGACCA GTTCTTTTTT GCGACTTCAA TCCTAGACAA TATCCGCTTT	7680
GGCAATCCTA ACTTGCCCCT TTCAGCGGTC GAGGAAGCTA CTAAGCTAGC CCGGGTTTAC	7740
CAAGATATTG TAGACATGCC TCAAGGATTT GATACGCTGA TTGGTGAAAA AGGAGTCACT	7800
CTTCTGGTG GTCAAAAGCA ACGGTTGGCT ATGAGTCGGG CTATGATTTT AGACCCTGAT	7860
ATCTTGATTT TGGATGATTC CTTATCCGCC GTAGATGCCA AGACAGAGTA TGCGATTATC	7920
GACAACCTCA AGGAGATGCG AAAGGACAAG ACAACCATTA TCACTGCCCC TCGCCTCAGT	7980
GCTGTTGTCC ATGCAGATTT TATTTTAGTT CTACAAAATG GTCAAATTAT CGAACGAGGC	8040
ACGCACGAAG ACTTGCTAGC TTTGGATGGC TGGTATGCCC AAACCTACCA GTCTCAGCAG	8100
TTGGAAATGA AAGGAGAAGA AGATGCAGAA TAAACAAGAA CAATGGACTG TATTGAAGCG	8160
CTTGATGTCT TATCTCAAGC CTTATGGACT CCTGACCTTT TTGGCACTCA GTTTTCTCCT	8220

572

AGCGACGACG	GTCATTAAAA	GTGTCATACC	CCTCGTGGCT	TCCCACTTTA	TCGACCAGTA	8280
TCTCAGCAAT	CTTAACCAAC	TAGCCGTTAC	CGTTTTGCTG	GTCTACTATG	GTCTCTACAT	8340
CCTACAAACT	GTAGTTCAGT	ATGTCGGCAA	TCTTCTCTTT	GCGCGCGTGT	CTTACAGTAT	8400
TGTTAGGGAT	ATTCTGTCGGG	ATGCCTTTGC	CAATATGGAG	AACTGGGCA	TGTCTTACTT	8460
TGACAAGACG	CCAGCAGGTT	CTATCGTTTC	TCGTTTGACC	AACGATACCG	AGACGATTAG	8520
TGATATGTTT	TCTGGGATTT	TATCCAGCTT	TATCTCAGCA	GTTTTTATCT	TTCTGACAAAC	8580
CCTTTATACC	ATGTTGGTGC	TGGATTTTCG	TTTGACGGCT	TTAGTCTTGC	TCTTTCTTCC	8640
TTTGATTTTC	CTTTTGGTCA	ATCTCTATCG	AAAAAAGTCA	GTGAAATCA	TCGAGAAAAC	8700
CAGAAGTCTC	TTGTCAGATA	TCAATAGTAA	GCTGGCAGAG	AATATCGAGG	GAATCAGGAT	8760
TATTCAGGCC	TTTAATCAAG	AGAAGCGCCT	GCAGGCAGAA	TTTGATGAAA	TCAACCAAGA	8820
ACACTTGGTC	TACGCCAACC	GTTCTGTAGC	CTTGATGCC	CTCTTTTGA	GACCTGCCAT	8880
GAGTTTGCTG	AAACTTCTAG	GCTATGCAGT	CTTGATGGCC	TACTTTGGCT	ACCGTGGTTT	8940
TTCTATCGGG	ATAACGGTCG	GGACCATGTA	TGCCTTTATC	CAGTACATCA	ACCGCCTTTT	9000
TGACCCCTTG	ATTGAGGTGA	CGCAAACTT	TTCAACTCTG	CAAACGGCTA	TGGTTTCTGC	9060
AGGTCGTGTC	TTTGCCCTGA	TAGACGAGAG	GACCTATGAA	CCTCTTCAAG	AAAATGGGCA	9120
AGCCAAAGTC	CAAGAAGGCA	ATATCCGTTT	TGAACATGTG	TGTTTCTCAT	ATGACGGTAA	9180
ACATCCGATT	CTGGATGACA	TTTCTTTCTC	TGTTAATAAG	GGTGAAACCA	TTGCCTTTGT	9240
AGGTCATACA	GGTTCAGGGA	AATCGTCTAT	TATCAATGTC	CTCATGCGCT	TTTATGAATT	9300
CCAGTCAGGG	AGAGTTCTCT	TGGATGATGT	GGATATCAGG	GATTTTCAGTC	AAGAAGAGCT	9360
GAGAAAAAAC	ATCGGTTTGG	TCTTGCAGGA	ACCCTTCCTC	TATCATGGAA	CTATTAAGTC	9420
CAATATCGCC	ATGTACCAAG	AAACCACTGA	TGAGCAGGTT	CAGGCTGCGG	CAGCCTTTGT	9480
GGATGCAGAT	TCCTTTATTC	AAGAACTTCC	TCAGGGGTAC	GACTCCCTCT	TTCCGAGCG	9540
TGGTTCGAGC	TTCTCTACTG	GGCAACGCCA	GCTTCTTGCC	TTTGCTAGAA	CAGTCGCCAG	9600
CCAGCCTAAA	ATCCTGATTT	TGGATGAAGC	GACAGCCAAT	ATTGACTCTG	AAACAGAAAG	9660
CTTGGTTCAA	GCTTCTCTGG	CGAAGATGAG	ACAGGGCCGA	ACAACTATTG	CTATCGCTCA	9720
CCGCCTTTCT	ACTATTCAAG	ATGCCAACTG	CATCTATGTC	TTGGATAAGG	GACGCATTAT	9780
CGAGAGTGGA	ACCCATGAGG	AACTCTTGGC	TCTGGGAGGA	ACCTATCACA	AGATGTATAG	9840
TTTGCAAGCA	GGGGCCATGG	CCGATACTCT	TTGAAAAATCT	CTTTAAACCA	TGTCAGCTTT	9900
ATCTGCAATC	TCAAAGCTGT	ACTTTGATTT	TCATTGAGTA	CTAGAAGGAA	ATCCTTCAAA	9960
TTACAGATTT	CTTTCACCGC	CTTTTCCATT	TTGTGGTATA	ATGAAAAATG	TTGACAAATA	10020

573

GTATAATAAA AACAAAGGAG AACAGCATGC TGAAATGGGA AGACTTGCCT GTGGAAATGA	10080
AATCAAGCGA GGTGAGTCT TACTACCAGC TTGTCTCTAA AAGGAAGGGT TCGCTGATTT	10140
TCAAGCGTTG CTTGGACTGG GTTTTGGCCT TGGTCTTACT GGTTCGTACC TCTCCCATCT	10200
TTCTCATCTT GAGCATTTGG ATCAAGTTGG ATAGCAAAGG GCCAGTGATT TACAAGCAAG	10260
AGCGTGTGAC CCAGTACAAC CGTCGGTTCA AGATTGGAA GTTTCGTACC ATGGTGACGG	10320
ATGCGGATAA AAAAGGAAGT CTGGTGACTT CTGCTAACGA TAGCCGCATT ACCAAGGTTG	10380
GAAATTTTCAT CCGACGTGTC CGTTTGGACG AACTGCCTCA GTTGGTCAAT GTCCTTAAAG	10440
GTGAGATGTC CTTGTTCGGT ACACGACCTG AAGTGCCACG TTATACAGAG CAGTATAGCC	10500
CTGAAATGAT GGCAACCTTG CTCTTGCAAG CAGGGATTAC CTCTCCAGCC AGCATCAACT	10560
ACAAGGATGA GGACACAATT ATCAGTCAAA TGACGGAGAA AGGTCTGTCA GTTGATCAGG	10620
CCTATGTGGA GCATGTTCTT CCTGAAAAGA TGCGCTATAA CCTCGCCTAT CTCCGAGAGT	10680
TTAGTTTCTT TGGGGACATC AAAATCATGT TTCAAACCGT GTTTGAGGTA CTAAAATAAA	10740
GTAGTCATAA GAAATGAGT ACAGATAAAA GGAGCAAATC AATGCCAAAT TACAATATTC	10800
CATTTTCACC GCCTGATATC ACAGAAGCAG AAATTACTGA AGTAGTGGAT ACCCTGCGTT	10860
CTGGTTGGAT CACAACAGGT CCTAAAACAA AAGAACTGGA GCGCCGCTTG TCTCTTTACA	10920
CACAGACACC TAAGACTGTT TGTCTCAACT CTGCGACAGC CGCTCTGGAG TTGATTTTAC	10980
GCGTTTGGGA AGTGGGACCT GGTGATGAAG TCATCGTTCC AGCCATGACC TATACGGCTT	11040
CATGTAGTGT CATTACGCAC GTGGGAGCAA CCCCTGTCAT GGTGGATATC CAAGCAGATA	11100
CGTTTGAGAT GGACTATGAC CTGCTTGAGC AAGCTATCAC TGAGAAAACCT AAGGTGATTA	11160
TTCCAGTAGA GCTCGCAGGG ATTGTTTGCG ATTATGACCG TTTGTTCCAA GTCGTGGAGA	11220
AAAAACGTGA CTTCTTTACC GCTTCAAGCA AGTGGCAAAA GGCCTTTAAC CGTATTGTCA	11280
TTGTCTCTGA TAGTGCCAC GCTTTGGGAT CTATTTATAA AGGACAACCT TCTGGTTCTA	11340
TCGTGACTT TACTTCCTTC TCATTCCATG CAGTTAAGAA CTTTACAACG GCAGAAGGTG	11400
GAAGTGCAC TTGGAAGCC AATCCAGTGA TTGATGACGA AGAGATGTAC AAGGAATTCC	11460
AAATCCTTTC CCTTCACGGG CAACTAAGG ATGCTCTTGC CAAGATGCAA CTGGGGTCAT	11520
GGGAATACGA TATCGTTACA CCAGCCTATA AGTGCAACAT GACCGATATC ATGGCTTCAC	11580
TTGGTTTGGT ACAATTGGAC CGCTATCCAA GTTTGTTGCA ACGCCGTAAG GACATTGTGG	11640
ACCGCTATGA TAGTGGTTTT GCAGGTTCTC GCATCCATCC TTTGGCACAC AAGACTGAAA	11700
CTGTCAATC TTCACGCCAC CTCTACATCA CCCGTGTAGA AGGAGCAAGC CTAGAAGAAC	11760

574

GCAACCTCAT CATCCAAGAA TTGGCTAAAG CAGGAATTGC AAGTAATGTT CACTACAAAC	11820
CGCTTCCTCT CTTGACAGCC TATAAGAATC TTGGATTGA TATGACGAAC TATCCTAAGG	11880
CCTATGCCTT CTTTGAGAAT GAAATTACCC TCCCTCTTCA TACTAAATTA AGCGATGAAG	11940
AAGTAGACTA TATCATTGAG ACTTTCAAAA CAGTTTCTGA AAAAGTGCTA ACTTTATCAA	12000
AAAAATGACA AACTACAGTC AAGCGAAAGT GATCCTGCCC CTAAAAAGTC TAATTGAGTG	12060
TAAAACTGT TGTTTTCAAT TGATAATAGT TTACACCTGT AGTTGAGGCC CCTTCTCCT	12120
CAGAGAGAGA ATTTTATAG GATTTTCCTT TCTTGTGGGA GTCCCGTGGT TTGAAATAAG	12180
ATGTGAGCAA TTTAGTGTAG CATTTAGAAT CCTTACTAGA CATCATTTAG AAAATCTAGT	12240
GTCTTGTCT AGTTTTCAAT TCACCCTATT TTTTGAAAGA CGTGAGTTTC CATGAGTGAG	12300
ATTGTGGAAT CTCGCGTCTT TTTTGTGTTT CAGAATATG TTCAAAATTT TGTGCCTGTC	12360
TTTCATGTTT TAGTCATTCT TTTGCATGAT AGAATTTATA GCATGTTGAT ATTATAATAA	12420
TACAAATATT CTATATGTTT AGTGATGCTT GCTATACATT ATTAGATCTC CTGCGAGACA	12480
ATCTATAAAA CACTTGCTTA CGATTACCTA TATGCCCTAT TCCAGTATTT TAGAAGCACT	12540
GCATCTATTT TTATCGAGGT TAAATCTAGC TTTTATAGAA GGTCTATTTA AGAAATATAT	12600
TGTAGTGTTT TAGTTTCAAT CCGCCATATG AGCGATATTC AGGTAAATAT CCCTGGCGAA	12660
TGCTTGATG ACAAGGTATT TGTCTTTTCA TTTATAATTT ACAACATATC AACAAATTTA	12720
AATATAGTAA ATGGGATATT TTATATTCAA GCTAAGAAAG ATAGCATCAC TTTTGAATGG	12780
AAGGCTAAAG AGCAAACTAG GAAGTTGGCC ATAGATAGCT CAAAACCTG CTTTGAGGTT	12840
GTAGATATAG TAAATGAAA TGAGAATAGG ACAAATTGAT CGGGACAGTC AAATCGATTT	12900
CTAACAATGT TTTAGAAGTA GAGGTGTACT ATTTTAGTTT CAGTCTACTA TAGAACTGAC	12960
CAAGTCAGTA ACCTAGACTT AGGCAAGGC GGCCTGACC TAGTTTGAAG AGATTTCCTGA	13020
AGAGTATAAA TTTTAATATT TTCTTGTTT ATTCCTTGAC AATTCAATTT GGAAATATA	13080
TGATAAAGAT AATGACAGCG GTGTCATTCT ATCTATTTTA AGAAAAGTAA TAATCAATTG	13140
TTAAAAATAG TAAAAAATTT GGAGGTTCTG ATGAAATATT TTGTTCCG	13188

(2) INFORMATION FOR SEQ ID NO: 71:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 32768 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

575

AACGAGTGCA TCAGTCTCAG CAAGCACCAG TGCCTCGGCC TCAGCAAGCA CCAGCGCGTC	60
TGAATCCGCA TCAACCAGTG CCTCAGCTTC AGCAAGTACC TCAGCATCTG AATCAGCATC	120
AACAAGTGCA TCGGCTTCAG CAAGCACAAG TGCTTCAGCC TCAGCAAGTA TCTCAGCGTC	180
TGAATCCGCA TCAACCAGTG CGTCCGCTTC AGCAAGTACT AGCGCCTCAG CATCAGCGTC	240
AACAAGTGCT TCGGCTTCAG CGTCAACGAG TGCCTCTGAG TCAGCATCAA CGAGTACGTC	300
AGCCTCAGCA AGCACATCAG CTTCTGAATC TGCATCAACC AGTGCCTCAG CCTCAGCATC	360
GACAAGCGCC TCAGCTTCAG CAAGTACCAG TGCCTCAGCC TCAGCAAGTA CCAGTGCTTC	420
AGCCTCAGCG TCGACAAGTG CGTCGGCCTC AACCAAGTGCA TCTGAATCGG CATCAACCAG	480
TGCGTCAGCC TCAGCAAGTA CTAGCGCCTC AGCCTCAGCA TCAACGAGTG CGTCCGCTTC	540
AGCAAGTACT AGTGCATCAG CATCAGCATC AACCAAGTGCA TCGGCTTCAG CAAGTACCAG	600
CGCCTCAGCT TCAGCAAGCA CCAGTGCGTC AGCCTCAGCA AGTACCAGCG CCTCAGCCTC	660
AGCAAGCACC AGTGCCCTCAG CTTCAAGCAAG TACCAGTGGC TCAGCCTCAG CGTCGACAAG	720
TGCGTCGGCT TCAGCAAGTA CCTCAGCGTC TGAATCAGCA TCAACGAGTG CATCAGCTTC	780
AGCATCAACA AGTGCTTCAG CTTCAAGCAAG TATCTCAGCG TCTGAATCGG CATCAACGAG	840
TGCGTCCGCT TCAGCAAGTA CTAGCGCCTC AGCATCAGCG TCAACAAGTG CTTGGGCTTC	900
AGCGTCAACG AGTGCGTCTG AGTCAGCATC AACCAAGTACG TCAGCCTCAG CAAGCACATC	960
AGCTTCTGAA TCTGCATCAA CCAGTGCGTC AGCCTCAGCA TCGACAAGCG CCTCAGCTTC	1020
AGCAAGTACC AGTGCGTCAG CCTCAGCAAG TACCAGTGCT TCAGCCTCAG CGTCGACAAG	1080
TGCGTCGGCC TCAACCAGTG CATCTGAATC GGCATCAACC AGTGCGTCAG CCTCAGCAAG	1140
TACTAGCGCC TCAGCCTCAG CATCAACGAG TGCGTCCGCT TCAGCAAGTA CTAGTGCATC	1200
AGCATCAGCA TCAACGAGTG CATCGGCTTC AGCAAGTACC AGCGCCTCAG CTTCAAGCAAG	1260
CACCAGTGGC TCAGnCTCAG CAAGTACCAG CGCCTCAGCC TCAGCAAGCA CCAGTGCCCTC	1320
AGCTTCAGCA AGTACCAGTG CGTCAGCCTC AGCGTCGACA AGTGCGTCGG CTTCAAGCAAG	1380
TACCTCAGCG TCTGAATCAG CATCAACGAG TGCATCAGCT TCAGCATCAA CAAGTGCTTC	1440
AGCTTCAGCA AGTACCAGTG CGTCGGCTTC AGCATCAACG AGTGCTTCAG TCTCAGCGTC	1500
AACCAGTGCC TCTGAATCAG CATCAACAAG TGCCTCGGCT TCAGCAAGCA CCAGTGCGTC	1560
GGCTTCAGCA AGTACTAGTG CATCGGCTTC AGCATCGACA AGTGCGTCTG AATCGGCATC	1620
AACGAGTGCT TCGGCTTCAG CATCAACGAG TGCGTCAGCC TCAGCAAGCA CATCAGCTTC	1680
TGAATCTGCA TCAACCAGTG CGTCCGCTTC AGCGTCAACC AGTGCGTCGG CTTCAAGCGTC	1740

576

GACAAGTGCT TCGGCTTCAG CATCAACGAG TCGGTCGGCC TCAGCAAGCG CAAGTACCTC	1800
AGCGTCAGct TCCGCCTCAA CCAGTGCCTC GGCTTCAGCA AGCACAAGTG CGTCAGCCTC	1860
AGCAAGTATC TCAGCGTCTG AATCGGCATC AACGAGTGCG TCTGAGTCAG CATCAACGAG	1920
TACGTACGCC TCAGCAAGCA CATCAGCTTC TGAATCTGCA TCAACCAGTG CGTCAGCCTC	1980
AGCATCGACA AGCGCCTCAG CTTTCAGCAAG TACCAGTGCT TCAGCCTCAG CGTCGACAAG	2040
TGCGTCGGCC TCAACCAGTG CATCTGAATC GGCATCAACC AGTGCGTCAG CCTCAGCAAG	2100
TACTAGTGCA TCAGCTTCAG CATCAACGAG TGCATCGGCT TCAGCATCAA CCAGTGCCTC	2160
GGCTTCAGCG TCAACCAGTG CGTCAGCTTC AGCAAGTACC AGTGCTTCAG TCTCAGCATC	2220
AACAAGTGCT TCAGCCTCAG CATCGACAAG TGCCTCGGCT TCAGCAAGCA CATCAGCATC	2280
TGAATCAGCG TCAACCAGTG CTTTCGGCTTC AGCAAGTACC AGTGCTTCAG CTTTCAGCATC	2340
AACCAGCGCC TCGGCCTCAG CAAGCACCTC AGCTTCTGAA TCGGCCTCAA CCAGCGCCTC	2400
GGCCTCAGCA AGCACCTCAG CTTCTGAATC GGCCTCAACC AGCGCCTCAG CCTCAGCATC	2460
AACGAGTGCT TCGGCTTCAG CAAGCACAAG CGCCTCGGGT TCAGCATCAA CGAGTACGTC	2520
AGCTTCAGCG TCAACCAGTG CTTTCAGCCTC AGCATCAACA AGTGCGTCAG CCTCAGCAAG	2580
TATCTCAGCG TCTGAATCGG CATCAACGAG TCGCTCTGAG TCAGCATCAA CGAGTACGTC	2640
AGCCTCAGCA AGCACCTCAG CTTCTGAATC GGCCTCAACC AGTGCGTCAG CCTCAGCATC	2700
GACAAGCGCC TCAGCTTCAG CAAGTACCAG TGCTTCAGCC TCAGCGTCGA CAAGTGCCTC	2760
GGCCTCAACC AGTGCACTTG AATCGGCATC AACCAGTGCG TCAGCCTCAG CAAGTACTAG	2820
TGCATCGGCT TCAGCATCAA CCAGTGCCTC GGCTTCAGCG TCAACCAGTG CGTCAGCTTC	2880
AGCAAGTACC AGTGCTTCAG TCTCAGCATC AACAAGTGCT TCAGCCTCAG CATCGACAAG	2940
TGCCTCGGCT TCAGCAAGCA CATCAGCATC TGAATCAGCG TCGACAAGCG CCTCAGCTTC	3000
AGCAAGTACC AGTGCGTCAG CCTCAGCGTC GACAAGTGCG TCAGCCTCAG CAAGTACTAG	3060
TGCATCAGCT TCAGCATCAA CGAGTGCATC GGCTTCGGCG TCAACCAGTG CATCAGAGTC	3120
AGCAAGTACC AGTGCGTCAG CTTCCGCATC AACAAGTGCC TCGGCTTCAG CAAGCACCAG	3180
TGCGTCGGCT TCAGCAAGTA CTAGCGCCTC AGCCTCAGCC TCAACCAGTG CGTCAGCCTC	3240
AGCAAGTATC TCAGCGTCTG AATCGGCATC AACGAGTGCG TCCGCTTCAG CAAGTACTAG	3300
CGCCTCAGCC TCAGCGTCAA CAAGTGCATC GGCTTCAGCG TCAACGAGTG CGTCTGAATC	3360
GGCATCAACG AGTGCGTCCG CTTTCAGCAAG TACTAGCGCC TCAGCCTCAG CGTCAACAAG	3420
TGCATCGGCT TCAGCATCAA CGAGTGCCTC CGCTTCAGCA AGTACTAGCG CCTCAGCCTC	3480
AGCGTCAACA AGTGCACTCG CTTTCAGCGTC AACGAGTGCG TCTGAGTCAG CATCAACGAG	3540

577

TGCGTCAGCC TCAGCAAGCA CATCAGCTTC TGAATCTGCA TCAACCAGTG CGTCAGCCTC	3600
AGCATCGACA AGCGCCTCAG CTTAGCAAG TACCAGTGCG TCAGCCTCAG CGTCGACAAG	3660
TGCGTCGGCT TCAGCAAGTA CCAGTGCGTC AGCCTCAGCA AGTACCAGTG CGTCAGCCTC	3720
AGCGTCGACA AGTGCGTCGG CCTCAACCAG TGCATCTGAA TCGGCATCAA CCAGTGCGTC	3780
AGCCTCAGCA AGTACTAGTG CATCAGCTTC AGCATCAACG AGTGCATCGG CTTAGCATC	3840
AACCAGTGCA TCAGAGTCAG CAAGTACCAG TGCGTCAGCT TCCGCATCAA CAAGTGCCCTC	3900
GGCTTCAGCA AGTACTAGCG CCTCAGCCTC AGCGTCAACA AGTGCTTCAG CTTCCGCGTC	3960
AACCAGCGCC TCGGCCTCAG CAAGTATCTC AGCGTCTGAA TCGGCATCAA CAAGTGCCCTC	4020
GGCTTCAGCA TCAACGAGTG CATCAGTCTC AGCAAGCACC AGTGCGTCGG CCTCAGCAAG	4080
CACCAGCGCG TCTGAATCCG CATCAACCAG TGCCTCAGCT TCAGCAAGTA CCTCAGCATC	4140
TGAATCAGCA TCAACAAGTG CCTCGGCTTC AGCAAGCACA AGTGCTTCAG CCTCAGCAAG	4200
TATCTCAGCG TCTGAATCGG CATCAACGAG TCGCTCCGCT TCAGCAAGTA CTAGCGCCTC	4260
AGCATCAGCG TCAACAAGTG CTTGGGCTTC AGCGTCAACG AGTGCGTCTG AGTCAGCATC	4320
AACGAGTACG TCAGCCTCAG CAAGCACATC AGCTTCTGAA TCTGCATCAA CCAGTGCGTC	4380
AGCCTCAGCA TCGACAAGCG CCTCAGCTTC AGCAAGTACC AGTGCGTCAG CCTCAGCAAG	4440
TACCAGTGCT TCAGCCTCAG CGTCGACAAG TGCGTCGGCC TCAACCAGTG CATCTGAATC	4500
GGCATCAACC AGTGCGTCAG CCTCAGCAAG TACTAGCGCC TCAGCCTCAG CATCAACGAG	4560
TGCGTCCGCT TCAGCAAGTA CTAGTGCATC AGCTTCAGCA AGTACTAGCG CCTCAGCCTC	4620
AGCGTCGACA AGCGCCTCAG CTTAGCAAG TACCAGTGCG TCAGCCTCAG CGTCGACAAG	4680
TGCGTCGGCT TCAGCAAGTA CCTCAGCGTC TGAATCAGCA TCAACAAGTG CGTCGGCTTC	4740
AGCATCAACG AGTGCATCAG CTTAGCATC AACAAAGTGCT TCAGCTTCAG CAAGTACCAG	4800
TGCGTCGGCT TCAGCATCAA CGAGTGCTTC AGTCTCAGCG TCAACCAGTG CCTCTGAATC	4860
CGCATCAACA AGTGCCCTCG CTTAGCAAG CACCAGTGCT TCGGCTTCAG CGTCAACGAG	4920
TGCGTCTGAG TCAGCATCAA CGAGTGCGTC AGCCTCAGCA AGCACATCAG CTTCTGAATC	4980
TGCATCAACC AGTGCGTCAG CTTCCGCATC AACAAAGCGCC TCGGCCTCAG CAAGTACAAG	5040
TGCTTCAGCC TCAGCATCAA CCAGTGATC AGCTTCAGCC TCAACAAGTG CTTAGCCTC	5100
AGCGTCAACC AGTGCCCTCG CTTAGCAAG TACCAGTGCG TCAGCTTCAG CAAGCACAAG	5160
TGCGTCAGCT TCAGCATCAA CCAGTGCTTC GGCTTCGGCA TCAACAAGTG CCTCAGCATC	5220
AGCATCAACG AGTGCGTCAG CCTCAGCAAG TACTAGTGCA TCAGCATCAG CATCAACCAG	5280

578					
TGCATCAGCC	TCAGCAAGTA	TCTCAGCGTC	TGAATCGGCA	TCAACGAGTG	CATCAGCATC 5340
AGCATCAACG	AGTGCATCGG	CTTCAGCGTC	AACCAGTGCA	TCAGTCTCAG	CAAGCACCAG 5400
TGCGTCGGCT	TCAGCATCAA	CGAGTGCCTC	AGCCTCAGCA	AGTATCTCAG	CGTCTGAATC 5460
GGCATCAACG	AGTGCCTCAG	CCTCAGCAAG	TACTAGTGCA	TCGGCTTCAG	CAAGCACCAG 5520
TGCGTCGGCT	TCAGCATCAA	CCAGTGCCTC	AGCCTCAGCA	AGTATCTCAG	CGTCTGAATC 5580
GGCATCAACG	AGTGCCTCAG	CCTCAGCAAG	TACTAGTGCA	TCAGCmTCAG	CATCAACGAG 5640
TGCATCGGCT	TCAGCAAGTA	CCAGCGCCTC	AGCTTCAGCA	AGCACCAGTG	CGTCAGCCTC 5700
AGCAAGTACC	AGCGCCTCAG	CCTCAGCAAG	CACCAGTGCC	TCAGCTTCAG	CAAGTACCAG 5760
TGCGTCAGCT	CAGCATCAAC	AAGTGCCTCA	GCTTCGGCCT	CAACAAGTGC	GTCAAGCTTCA 5820
GCATCAACGA	GTGCGTCGGC	TTCAAGCAAG	ACCAGTGCCT	CGGCCTCAGC	AAGCACCAGT 5880
GCTTCAGCTT	CAGCATCAAC	AAGTGCCTCA	GCTTCAGCAA	GTACATCAGT	TTCAAATTCA 5940
GCAAACCATT	CGAACTCACA	AGTTGGAAT	ACTTCTGGAT	CGACAGGTAA	ATCCCCAAAA 6000
GAATTGCCCTA	ATACAGGTAC	TGAGTCGTCA	ATTGGATCTG	TGTTACTTGG	AGTTCTAGCA 6060
GCTGTTACAG	GTATTGGATT	GGTTGCGAAA	CGCCGTAAAC	GTGATGAAGA	AGAGTAAGAC 6120
AACCTGTAAC	GTTAGGCTAA	ACTAACTCGC	GCACATAAAT	CAAGGAGAAA	ATTGCTAGTG 6180
GATGATAAAA	TAACAGTCAT	TGTACCAGTA	TACAATGTGG	AAAACTATCT	GAGGAAGTGC 6240
CTAGATAGTA	TTATTACTCA	AACATATAAA	AATATTGAGA	TTGTTGTCGT	TAATGATGGT 6300
TCTACGGATG	CTTCAGGTGA	AATTTGTAAA	GAATTTTCAG	AAATGGATCA	CCGAATTCTC 6360
TATATAGAAC	AAGAAAATGC	TGGTCTTTCT	GCCGCACGAA	ACACCGGTCT	GAATAATATG 6420
TCCGGAATTT	ATGTGACCTT	TGTGGACTCG	GATGATTGGA	TTGAGCAAGA	TTATGTAGAA 6480
ACTCTATATA	AAAAAATAGT	AGAGTATCAG	GCTGATATTG	CAGTTGGTAA	TTATTATTCT 6540
TTCAACGAAA	GTGAAGGAAT	GTTCTACTTT	CATATATTGG	GAGACTCCTA	TTATGAGAAA 6600
GTATATGATA	ATGTTTCTAT	CTTTGAGAAC	TTGTATGAAA	CTCAAGAAAT	GAAGAGTTTT 6660
GCTTTGATAT	CTGCTTGGGG	TAAACTCTAT	AAGGCAAGAT	TGTTTGAGCA	GTTGCGCTTT 6720
GACATAGGTA	AATTAGGAGA	AGATGGTTAC	CTCAATCAAA	AGGTATATTT	ATTATCAGAA 6780
AAGGTAATTT	ATTTAAATAA	AAGTCTTTAT	GCTTATCGGA	TTAGAAAAGG	TAGTTTATCA 6840
AGAGTTTGGA	CAGAAAAGTG	GATGCACGCT	TTAGTTGATG	CTATGCTCTGA	ACGTATTACG 6900
CTACTAGCTA	ATATGGGTTA	TCCTCTAGAG	AAACACTTGG	CAGTTTATCG	TCAGATGTTG 6960
GAAGTCAGTC	TCGCCAACGG	TCAAGCTAGT	GGTTTATCTG	ACACAGCAAC	GTATAAAGAG 7020
TTTGAAATGA	AACAAAGGCT	TTTAAATCAG	CTATCGAGAC	AAGAGGAAAG	TGAAAAGAAA 7080

GCCATTGTCC TCGCAGCAAA CTATGGCTAT GTAGACCAAG TTTTAACGAC AATCAAGTCT 7140
ATTTGTTATC ATAATCGTTC GATTCGTTTT TATCTGATC ATAGCGATTT TCCAAATGAA 7200
TGGATTAAGC AATTAAATAA GCGCTTAGAG AAGTTTGA CTGAGAAATTAT TAATTGTCGG 7260
GTAACCTCTG AGCAAATTC ATGTTATAAA TCGGATATTA GTTACACAGT CTTTTTACGC 7320
TATTTTCATAG CTGATTTCTG GCAAGAAGAC AAGGCCCTCT ACTTGGACTG TGATCTAGTT 7380
GTAACGAAAA ATCTGGATGA CTTGTTTGCT ACAGACTTAC AAGATTATCC TTTGGCTGCT 7440
GTTAGAGATT TTGGGGGCAG AGCTTATTTT GGTCAAGAAA TCTTTAATGC CGGTGTTCTC 7500
TTGCTAAACA ATGCTTTTTG GAAAAAGAG AATATGACCC AAAAATTAAT TGATGTAACC 7560
AATGAATGGC ATGATAAGGT GGATCAGGCA GATCAGAGCA TCTTGAATAT GCTTTTTGAA 7620
CATAAATGGT TGGAATTGGA CTTTGATTAT AATCATATTG TCATTCATAA ACAGTTTGCT 7680
GATTATCAAT TGCCTGAGGG TCAGGATTAT CCTGCTATTA TTCACTATCT TTCTCATCGG 7740
AAACCGTGA AAGATTTGGC GGCCCAAACC TATCGTGAAG TTTGGTGGTA CTATCATGGG 7800
CTTGAATGGA CAGAATTGGG ACAAACCAT CATTACATC CATTACAAAG ATCTCACATC 7860
TATCCAATAA AGGAACCTTT CACTTGCTA ATCTATACTG CCTCAGACCA TATTGAACAA 7920
ATTGAGACAT TGTTCAATC CTTGCCTGAT ATTCAGTTTA AGATAGCAGC TAGAGTAATA 7980
GTTAGTGATC GATTGGCTCA GATGACAATT TATCCAAACG TGACTATATT TAACGGAATT 8040
CACTATTGG TAGATGTCGA TAATGAATTG GTAGAAACCA GTCAAGTACT TTTAGATATT 8100
AATCATGGCG AAAAGACAGA AGAAATCTC GATCAATTG CTAATCTGG CAAGCCTATC 8160
TTATCCTTTG AAAATACTAA AACCTATGAA GTAGGTCAGG AGGCATATGC TGTGACCAA 8220
GTTCAAGCAA TGATTGAAAA ATTGAGAGAA ATAAGCAAAT GAAGAAAAAT CATTTAGTAG 8280
GAGATGCTCT GATTTTGACG GTTAGTGATC AGATTGAAGA GTTGGATTAT TTTTATAAA 8340
ATTTCTCCGT TCATCATATA TGAAAGTTGT TCAAACATCA GAGTGCTTTA TAAAATATAA 8400
ATAGACCTAA AGATATTTAA TATGAACTGC ACCCAAAG TTAGACAGAA AAAATCTAAC 8460
TTTTTGGsGT CAGTACAATA TTAGGGTGTG ATTAATTATC TTTTATAGTG AAAATGATTC 8520
TATATTATAG CTGTTTGATA CGAAATTTAT TATAAGGAAA TTATGTTAAT GAATACAAAA 8580
TCTATAGTTT TTAATGCAGA TAATGATTAT GTAGATAAAT TAGAACTGC AATTAAATCT 8640
ATTTGTTGTT ATAATAATTG TTTAAAATTT TATGTATTTA ATGATGATAT TGCCTCAGAG 8700
TGGTTTTTGA TGATGAATAA GCGATTGAAG ACTATACAA CTGAAATCGT TAATGTAAAG 8760
ATTGTAGATC ATGTTCTTAA AAAGTTTCAT TTACCGTTAA AGAATTTAAG TTATGCCACT 8820

580

TTCTTTCGTT ATTTTATACC TAATTTTGTC AAAGAAAGTC GTGCTTTATA CCTAGATTCT	8880
GACATCATTG TTACAGGAAG TTTAGACTAT TTATTTGATA TAGAACTAGA TGGTTATGCC	8940
TTGGCAGCAG TAGAAGATTC TTTTGGTGAT GTTCCTTCTA CCAATTTTAA CTCCGGAATG	9000
TTATTAGTTA ATGTAGATAC TTGGAGAGAT GAAGATGCTT GTTCGAAACT GTTAGAACTG	9060
ACCAATCAAT ATCATGAAAC AGCATATGGA GATCAAGGAA TTTTAAATAT GTTATTCCAT	9120
GATAGATGGA AAAGATTAGA CCGAAATTTT AATTTTATGG TGGGGATGGA TAGCGTCGCA	9180
CACATAGAAG GAAATCATAA ATGGTATGAG ATTTCTGAGT TGAAAAATGG AGATTACCT	9240
AGTGTTATAC ATTATACTGG GGTAAACCT TGGGAAATAA TTCCAATAA TCGCTTTAGA	9300
GAAGTTTGGT GGTTTTATAA TCTGTTAGAA TGGTCTGATA TTTTATTGAG AAAAGACATT	9360
ATTAGTCGTA GTTTCGAAGA ACTTGTATAC AGTCCTAAAG CTCATACAGC AATTTTACA	9420
GCTAGTTGTG AGATGGAGCA TGTAGAATAT TTGATAGAAA ATTTACCAGA GGTACATTTT	9480
TCTATACTAG CACATACATA TTTTGCCTCT AGTGTCGTTG CTTTATTAAG ATATAGCAAT	9540
GTTACGATTT ATCCTTGTMT TTCTCCATTT GATTATCGAA AAATTTTGA TAATTTAGAT	9600
TTTTATTTAG ATATTAATCA TTATAAGAA GTGGATAATA TTGTATCCGT TGTCAACAA	9660
CTATCTAAAC CAATTTTAC CTTTGAAAA ACTAGTCATG ATATAGGCAA TCAAACCTAAT	9720
ATATTTTCTT CAACCGAACC AAACAAAATG GTAGAGGCTA TTAGACAATT TATAGGAGAA	9780
TAAGTTTATG GCAGACGAAC TAATTAGTAT TGTAGTTCCA ATCTACAACG TTGAGAATTA	9840
TTTGCGAATG TGTTTGGATA GCATTCAGAA TCAGACGTAT CAAAATTTTG AGTGTTTATT	9900
AATCAATGAT GGCTCTCCAG ATCATTATC CAAAATATGT GAAGAATTTG TAGAGAAAGA	9960
TTCTCGTTTC AAATATTTTG AGAAAGCAA CGGCGGTCTT TCATCAGCTC GTAACTAGG	10020
TATTGAATGT TCGGGGGGG GCGTACATTA CTTTGTAGA CTCTGATGAT TGGTTGGAAC	10080
ATGATGCTTT AGACCGATTA TATGGTGCTT TGAAAAAGGA AAACGCAGAT ATTAGTATCG	10140
GGCGTTATAA TTCTTATGAT GAAACACGCT ATGTGTATAT GACTTATGTT ACGGATCCAG	10200
ATGATTCTCT AGAAGTGATA GAAGGTAAAG CAATTATGGA TAGGGAAGGT GTCGAAGAAG	10260
TCAGAAATGG GAACTGGACT GTAGCTGTCT TGAAGTTATT CAAGAGAGAG TTACTACAAG	10320
ATTTACCATT TCCTATAGGA AAAATTGCAG AGGATACTTA CTGGACATGG AAGGTACTTC	10380
TAAGAGCTTC GAGGATAGTC TATTTGAATC GTTGTGTTTA CTGGTACCGT GTTGGTTTAT	10440
CTGATACTTT ATCGAATACA TGGAGTGAAA AGCGTATGTA TGATGAAATT GGGGCTAGGG	10500
AAGAAAAGAT AGCTATTTTA GCAAGTTCAG ACTATGACTT GACCAATCAT ATTTTGATTT	10560
ATAAAAATAG ATTACAAAGA GTGATAGCAA AATTAGAAGA ACAAATATG CAGTTCACAG	10620

581

AGATTACAG AAGAATGATG GAAAAATTGT CTTTACTTCC GTAGATAGTA ATAAAAATG	10680
AGATAGCGTA ATATGAACT ACATTAAACA AATTTATACG GCATGGCTGG TGATAGTACG	10740
GTTATCTTAG CTCAAAATGC TGTTCAAAAG ATAGCTAGTC AACTGGGATT TAGAGAGGTT	10800
GGTATTTATT TTTACAACAT TGCTTCAGAT AGTCCTTCTG AAATGAATAA GCGTCTGGAT	10860
GGTATTATGG CCAGTATCTC TATTGGGGAT ATTTTAGTCT TTCAGTCTCC AACCTGGAAT	10920
GGTTTGAAT TTGATCGTCT CTTGTTTGAT AAGCTAAAGG ATATGCAGGT GAAAATTATT	10980
TGCTTTATCC ATGATGTTGT TCCCCTCATG TTTGATAGTA ACTATTATCT CATGAAAGAT	11040
TATCTGTATA TGTATAATCT ATCAGATGTT TTGATAGTGC CGTCAGAGAG AATGAAAACA	11100
CGCCTGATGG AAGAAGGATT GACGACTAAG AAGATTCTTG TTCAAGGGAT GTGGGATCAT	11160
CCTCATGATT TATCCTTATA CACCCTGCT TTTAAAAAG AACTTTTTTT TGCTGGAAGT	11220
TTAGAGCGTT TTCCAGACTT ACAAATTGG TCTCAAGATA CGCCTTTGAG AGTATTTTCA	11280
AATAAAGGGG AAGCTAGTTC TAGTGCTAGA AGTCTCAGCA TCGAAGGATG GAAAAAGAT	11340
GAGGAATGTG TGCTAGAATT ATCAAAGGGT GGATTGGGCC TTGTCTGGGG AACCCATCAA	11400
AATGAGGGAG AAAGTAACCA ATACTATACC TTGAATATAT CTCATAAGGT GAGTACCTAT	11460
CTAACAGCGG GCATTCCAGT CATGTGACCA AGTAGCTTGT CAACTGCTAA ATTTATAGTA	11520
GATCAAGGCT TGGGCTTTAT GGCGGATAGT CTGGAAGAGG TTCATGAGAT AGTTGATAAA	11580
ATGAATCTAC AAGAATATCA AGAAATGACG AATCGTATCA AGACCTTTAG CTATTTGTTA	11640
AAAGAGGGCT ATTTCACTAA AAAGTTATTG GTAGATGCAA TCTATCACTT GGAATTGAT	11700
TAAGGGAATG AAATGAACAA AACAATTGTA CTAGCAGGGG ATCGCAATTA CACCAGGCAG	11760
TTAGAAACAA CGATAAAATC TATTTTATAC CACAATCGAG ATGTTAAGAT TTATATTTTG	11820
AATCAAGATA TCATGCCAGA TTGGTTTCGC AAACCACGAA AAATAGCTCG CATGTTAGGT	11880
AGTGAGATTA TCGATGTTAA ACTACCTGAA CAACTGTGT TTCAAGATTG GAAAAGCAA	11940
GATCACATTA GTAGCATTAC TTATGCTAGA TATTTTATTG CAGATTATAT CCAAGAAGAT	12000
AAGGTTTTAT ATTTAGACAG TGATTGATT GTAAATACTT CTTTAGAGAA ATTATTTAGT	12060
ATTTGTTTAG AAGAAAAATC ACTCGCAGCA GTTAAAGATA CAGATGGAAT TACATTTAAT	12120
GCAGGTGTTT TATTAATCAA CAATAAAAAA TGGCGTCAAG AGAAATTAAA AGAACGACTA	12180
ATTGAACAGA GCATTGTTAC AATGAAGGAA GTTGAAGAAG GCCGTTTCGA GCATTTTAAT	12240
GGTGATCAAA CGATTTTAA TCAGGTCTTG CAAGATGATT GGTTAGAACT AGGTGAGCT	12300
TATAATTTAC AAGTAGGGCA TGATATTGTG GCTTTGTATA ACAATTGGCA GGAACATCTG	12360

582

GCTTTTAATG ATAAACCAGT GGTGATTCAT TTTACGACCT ACAGAAAACC CTGGACTACC	12420
TTGACAGCCA ATCGTTATCG TGATTTATGG TGGGAATTCC ATGATTGGA GTGGAGTCAG	12480
ATTTTACAAC ACCATATGGG AGAATTTGAA CTAATATCGC CTCTAGATAA GGAATTTTCT	12540
TGCTTAACCT TAACGAATTC CCAAGATTTA GAAGGAATAG AAGAGCTAGT TACAGCTCTA	12600
CCTGAGGTGG TATTTTCATAT CGCAGCTTGG ACGGATATGG GAGATAAATT AAAAAAATTA	12660
GCTGTATATA ATAATGTGAG ATTGCATCCA CAAATGTTC CACCGGTCTT AGATAAGCTG	12720
AAAAAGTCAA CAAATCTATA TTTGGATATC AATCATGGTA GTGCAGATGA GAACTTTTTA	12780
AAATCTTTCG AAGAACAAGA AAAAACGCTA CTAGCTTTTC AATCGACTCA GCACGGAGAG	12840
TTAGGACAAA TCGTTTTCGA AAATGGGAAA GTTTCCTTTA TGATTGATAC GATTAAAGAT	12900
TTTAAGAAAA ACGGACATCT TACCTGTTTT CGACAACCTC CAAGTTTAAC TTGTTTAACG	12960
TTTACGGCTT CTCAGTATAT CGAACAATTG GATTACTTGG CTGGACAGTT GCCAAATGTT	13020
GTTTTTCAAA TTGCTGCTTG GACAGCTATG GGGCCAAAAT TATATGATTT GTCTAATCGT	13080
TATCCTAATA TTCAGCTCTA TCCGGCAATT TCTAGAGATA AGCTAGACGA GTTGAAGGAG	13140
AAGATGGATG CTTATTTAGA TATCAACCTA CTGACTTCAA CATCCGATAT CGTTGCAGAA	13200
ATGGCTCATC TATCTAAACC TATACTAGCC TTTTATAAAT CTCAAAATGG GAATAATGGC	13260
CAAAGGTTGT ATTCAAGTGA ACATCCTGAA CGAATGTTGG CTGATTTGCA AAAATTGATA	13320
ACTAAGGATA TGCTAGAAAA ACCGCTTGAT ATAATCCAGG TGAAAGGGAT AGATGAAACC	13380
TTGGATTATA TTATTGAACA CAACTCTTCT TTAGTTCGTT TTGGAGATGG GGAAATCAAT	13440
ATGCTTGCAG GGCATTCAAT TCCCTACCAG GATTATGATG AAGAGTTGGT TTCAATCATG	13500
AGGGACATTA TCGGCCAAGA AAGTCGAGAA GATTTAGTAG TGTGCCCTCC TGATGCTTTT	13560
ACAGATCGTT TTAGGTTTAC ATCGTGGGCG ATTCCATTTT GGAAAGATCA CATGGATCAT	13620
TATATGGATT TTTACAGAGA GTTATGCAGT GATTCATGGT ATGGCTCAAC CTTTGTATCT	13680
CGCCCTTATA TCGATTTTGA AGACAAGAGT CAAGCTAAAG CTCAATTGTA AAAATTGAAA	13740
AGCATTTGGG AAAACCGTGA CTTACTGATA GTCGAAGGTG CGACTTCTCG TTCAGGTGTC	13800
GGAAATGATT TATTCGATGA GGCAAATTCT ATTAAGCGAA TTATCTGTCC TTCTCATAGT	13860
GCCTTTTCTA GAGTTCATGA ACTTGAACAA GAAATTGAAA AGTATGCTGG TGGTCGCTTG	13920
ATTTTATGTA TGCTTGGAAC TACAGCAAAA GTTCTGAGTT ATAATCTATG CCAGATGGGC	13980
TATCAAGTTT TGGATGTAGG CCATATTGAC TCAGAGTATG AATGGATGAA AATGGGAGCT	14040
AAAACTAAGG TTAAATTTTC TCATAAACAT ACTGCAGAAC ATAATTTCTGA CCAAGATATT	14100
GAATTTATTG ATGATGAAAC CTATAACAGT CAGATTGTTG CACGAATATT AACTAGACT	14160

583

ATTTAAATA AATGATAAGG ATTTAAATG AGAAATACCA AACGCGCTGT AGTATTTGCA	14220
GGTGATTACG CTTATATTCG ACAAATCGAA ACGGCGATGA AGTCACTCTG TAGACACAAT	14280
AGTCATTTGA AAATTTATCT GCTAAATCAG GACATTCTCT AGGAATGGTT TAGTCAAATA	14340
AGAATATATT TACAAGAGAT GGGGGCGAC TTGATTGACT GCAAGTTAAT TGGCTCACAG	14400
TTTCAAATGA ATTGGTCTAA TAAATTACCT CATATCAATC ATATGACATT TGCACGCTAT	14460
TTTATTCAG ATTTGTAA AGAAGATAAA GTTCTCTATC TAGATAGTGA TTTGATTGTG	14520
ACTGGTGATT TGACCGATTT GTTTGAATTA GACTTAGGTG AAAATTATTT GGCAGCAGCT	14580
CGTTCTTGCT TTGGAGCAGG AGTCGGCTTC AATGCTGGTG TTCTCTTGAT TAACAACAAA	14640
AAATGGGGAT CTGAACTAT TCGACAAAAA TTGATTGACT TAACAGAAAA AGAACATGAG	14700
AATGTGGAAG AAGGAGACCA GTCAATTTTG AATATGTTGT TTAAAGATCA ATATAGTTCC	14760
CTTGAAGATC AATATAATTT TCAAATAGGA TATGATTATG GGGCGGCAAC CTTTAAACAT	14820
CAATTCATTT TTGATATTCC GCTCGAACCA CTGCCACTAA TTTTACACTA TATTTCTCAG	14880
GATAAGCCTT GGAATCAATT TTCTGTTGGA CGTCTAAGAG AAGTTGGTG GGAATACTCT	14940
TTGATGGATT GGTCTGTTAT TTAAATGAA TGGTTTTCAA AGAGTGTGAA GTACCCTAGT	15000
AAATCACAAA TATTTAAGTT GCAATGTGTT AATTTAACGA ATTCTTGGTG TGTCGAGAAA	15060
ATCGATTATT TGGCGGAGCA ATTGCCAGAA GTTCATTTTC ATATTGTTGC TTATACAAAT	15120
ATGGCAAATG AACTACTAGC TTAAACGCGT TTCCCTAATG TTACCGTATA TCCAAATTCC	15180
TTACCAATGT TATTGGAACA AATAGTAATA GCTTCAGATT TGTATTTGGA TTTGAATCAT	15240
GATCGAAAAT TAGAAGATGC ATATGAGTTT GTGCTTAAGT AAAAAAACC AATGATAGCT	15300
TTCGACAATA CTTGCTCTGA AAATCTTTCT GAGATTTTCA ATGAAGGTAT CTATCCAAGC	15360
TCCATTCCGA AAAAAATGGT TGCAGCAATC AGATCTTACA TGAGGTAGAG AACAGTATGA	15420
GAAAAATCAAT AGTATTAGCG GCAGATAATG CCTATCTTAT TCCTTTAGAG ACGACTATAA	15480
AGTCTGTATT GTATCACAAT AGAGATGTTG ATTTTATAT TCTCAACAGT GATATAGCTC	15540
CTGAATGGTT TAAATTTATG GGGAGAAAAA TGGAAGTTGT GAATTTCTACA ATTTCAGTG	15600
TACACATTGA TAAAGAACTT TTTGAAAGCT ATAAACAGG ACCTCATATA AATTATGCTT	15660
CTTACTTTAG ATTTTTCG ACAGAAGTGG TTGAATCTGA TAGGGTATTG TATCTGGATT	15720
CCGATATCAT TGTAAGTGGG GAACTAGCTA CTTTGTGTTGA GATAGATCTC AAAGGATATT	15780
CAATTGGTGC TGTGATGAT GTCTATGCCT ATGAAGGACG AAAATCTGGA TTTAATACTG	15840
GTATGTTACT AATGGATGTT GCAAAGTGA AAGAACATTC TATTGTCAAT AGTTTATTTGG	15900

584

AATTAGCGGC CGAGCAGAAT CAAGTTGTTT ATCTTGGGGA TCAGAGTATT TTAAATATTT	15960
ATTTTGAGGA TAATTGGCTA GCCTTAGATA AAACATATAA TTATATGGTG GGTATTGATA	16020
TTTATCACCT TGCTCAAGAA TGTGAACGTC TAGATGACAA TCCACCTACA ATTGTTCACT	16080
ATGCTAGTCA TGATAAACCT TGGAAACAT ATAGTATATC TAGACTACGT GAATTATGGT	16140
GGGTTTATAG AGATTGGAT TGGTCAGAGA TTGCTTTTCA ACGTTCCGAT TTAAATATTT	16200
TTGAAAGAAG CAATCAGTCT AAAAAACAAG TGATGCTTGT GACATGGAGT GCAGATATAA	16260
AACATTTAGA GTATTTAGTA CAACGGTTAC CTGATTGGCA TTTTCATTTG GCTGCACCGT	16320
GTGATTGTTC TGAGGAGCTG ACCTCTCTAT CACAGTATAC GAATGTAACA GTATATCAAA	16380
ATGTATTACA TAGTAGAATT GATTGGCTAT TGGACGATTC TATAGTTTAT TTAGATATTA	16440
ATACAGGTGG AGAGGTTTTT AATGTAGTTA CAAGGGCACA AGAAAGTGGC AAGAAAATCT	16500
TCGCTTTTGA TATCACACGT AAAAGTATGG ATGATGGACT CTATGACGGT ATTTTTTCTG	16560
TGGAGAGACC AGATGATTTA GTGGATAGAA TGAAGAATAT AGAGATAGAG TAATGAGTGA	16620
ATTAATTAGT GTTGTGGTAC CGATATACAA TACGGGAAAA TATTTAGTGG AGTGTGTCGA	16680
GCATATTCTG AAGCAAACCT ATCAAAATAT AGAAATTAT TTAGTTGATG ACGGTTCTAC	16740
GGATAATTCT GGGGAAATTT GTGATGCTTT TATGATGCAA GATAATCGTG TCGGAGTATT	16800
GCATCAAGAA AATAAGGGGG GGGCAGCACA AGCTAAAAAT ATGGGGATTA GTGTAGCTAA	16860
GGGAGAGTAC ATCACGATTG TTGATTCAGA TGATATCGTA AAAGAAAATA TGATTGAAAC	16920
TCTTTATCAG CAAGTCCAAG AAAAGGATGC AGATGTTGTT ATAGGGAATT ACTATAATTA	16980
TGACGAAAGT GACGGGAATT TTTATTTTGA TGTAACAGGG CAAGATTTTT GCGTCGAAGA	17040
ATTAGCTATA CAAGAAATTA TGAACCGTCA AGCAGGAGAT TGGAAATTC AATAGCTCGGC	17100
CTTTATATTG CCGACATTTA AGTTGATTAA AAAAGAATTA TTCAATGAAG TTCACTTTTC	17160
AAATGGTCGC CGCTTTGATG ATGAAGCAAC TATGCATCGC TTTTATCTTT TAGCCTCTAA	17220
AATCGTCTTT ATAAACGATA ATCTCTATCT GTATAGAAGA CGTTCAGGAA GCATCATGAG	17280
AACGGAATTT GATCTTTCCT GGGCAAGAGA TATTGTTGAA GTGTTTTCTA AGAAAATATC	17340
GGATTGTGTC TTGGCTGGTT TGGATGTCTC CGTTCTGCGT ATTCGATTTG TCAATCTTTT	17400
AAAAGATTAT AAGCAAACCT TAGAATACCA TCAATTAACA GATACTGAGG AATATAAAGA	17460
TATTTGTTTC AGATTAAAGT TGTTTTTTGA TGCAGAACAA AGAAATGGTA AAAGTTGAAA	17520
TAAAGAATT GTTATTTACC ATATCACAAA CAATGAAGGT GAGGGGAGTG TTTTATGACT	17580
AAGATTTATT CGTCAATAGC AGTAAAAAAA GGACTATTTA CCTCATTTCT ACTGTTTATC	17640
TATGTATTGG GAAGTCGTAT TATCTCCCT TTTGTTGACC TAAATACTAA AGATTTTTTA	17700

585

GGAGGTTCAA CAGCCTATCT AGCCTTCTCA GCCGCCCTAA CAGGTGGGAA TCTAAGAAGT	17760
TTATCAATTT TTTCTGTTGG ATTATCCCCT TGGATGTCCG CCATGATTTT ATGGCAGATG	17820
TTTTCTTTTT CTAAACGGTT GGGTTTAAAC TCTACGTCTA TAGAAATACA AGATCGCCGT	17880
AAAATGTACC TGACCTTGCT AATTGCTGTG ATTCAATCCT TGGCAGTTAG CTTGAGACTG	17940
CCAGTACAAT CCTCCTATTC TGCAATATTG GTTGTCTTAA TGAATACAAT ATTGCTGATA	18000
GCAGGAACAT TTTTCTTGT TTGGTTGTCA GATTTAAATG CGAGTATGGG GATTGGAGGT	18060
TCTATTGTAA TCCTCCTATC CAGTATGGTT TTAAATATTC CTCAGGATGT TTTGGAAACA	18120
TTTCAGACAG TACACATTCC AACAGGGATT ATTGTGTTAC TTGCTTTATT AACCCTTGTC	18180
TTTTCTTATT TACTTGCCCT TATGTATCGA GCTCGCTATT TGGTTCCTGT TAATAAAATT	18240
GGCTTACACA ATCGATTTAA ACGCTATTCT TATCTCGAAA TCATGTTGAA TCCTGCAGGT	18300
GGGATGCCTT ATATGTATGT GATGAGTTT CTTAGTGTAC CAGCTTATTT GTTCATCTTG	18360
TTGGGATTTA TTTTCCCTAA TCATTCAAGG TTAGCGGCTT TATCAAAGGA ATTTATGGTT	18420
GGAAAGCCTT TGTGGGTCTA TGTTTATATT TCGGTCTTAT TTTTATTTAG TATCATTTTT	18480
GCTTTTGTTA CGATGAATGG AGAAGAGATT GCAGACCGTA TGAAAAATC TGGAGAATAC	18540
ATTTATGGTA TTTATCCAGG TCGGATACT AGTCGATTTA TTAATCGATT GGTCTTCGT	18600
TTCTCAGTCA TAGGTGCTCT CTTAATGTG ATTATGGCAG GTGGTCCCAT GCTTTTTGTT	18660
TTGTTTGATG AAAAGTTATT ACGATTGGCA ATGATTCCAG GCTTATTTAT GATGTTCCGG	18720
GGCATGATTT TTACGATTAG AGACGAGGTC AAGGCTTTAA GGCTAAATGA GACCTATAGA	18780
CCTTTGATTT AGGAGACTTT TATGTATTAT TTTATTCCAG CTTGGTATGG GTCAGAAAGA	18840
ACATGGCATG CAGATATCAC TCCATGGTAT TTTCTCTATT TTCGTCTAGA GTTTGATGAT	18900
ACCTTTCACC AGATTCGGCT CTTTCAAGAG CAAGATATAG ATTCTCGTCT ATTAGTATTA	18960
GCTTACCAGC CTCATCTACG TTATTTTTTA TATAGACATG GTGTGTTAGA AATGGATACT	19020
TATTCCGTTT TTGATGTAT GCAAGATTT CATAATCTCC ATACCCAAGT TTTAAGCATT	19080
AGAGATATTG AGTGGGATGA TGA CTGTGAA TTTATTTATA GTCCCTTTAC GATTATCGTT	19140
CAAAAAATG GGAAGAAATT TGCTAAGGTT GAACATGGAG TTGAAGGCTT CATCAGTGAT	19200
ATACAGTATT TTGAACCAAA TGGTCAAATA CATATGCACC ATATCGTGGA TGATCGTGGG	19260
TTTGTATCGA GCATTATCTT TTTTGAAGAT GGGCAAGCAG CCTATCAAGA ATATCTGAAC	19320
CTCAAGGGAG AGTGGCAATT CAGAGAGCGT TTAAGAAGAG GAGGACAGGT AGAAGTCAAT	19380
CCAATTTTGG GTTATCGCTT TAAAATGCTT ACCTATCAAA ATATGGGAGA TCTGGTGGCA	19440

586

GAATTTTTTG AGAATTATCT GCAAACGTAT GTGAAGGATC AGGATATTTT TATGCTTCCT	19500
TCTCATTCTC ATCATGACCA GTTGGTACTA GATCGTTTAC CTAGTACTAA TCCTAAACTG	19560
TTGAGTCTGT TCATTGGACG TAATCCTCAA GATACCTTTA GGGATTTAGA TGTAACCTTT	19620
GAAAAATCGG ATTTGATTTT GGTGGATAGA GAGGATAGTT TACGATTGTT GCAGGAGTTG	19680
TATCCTGAAC GAATGCATCA ATGTTATCAT TTATCATCTT TTGACACCCG ATTACGATTG	19740
GGACGAAGCC AAAC TAAGAA AGAATCCATC ATTTATTTTC AACTGGATTT TGAGCAGGGG	19800
ATTGATAATC AAGCTCTGCT TCAAGTCTTG TCCTTTGTCG CTGAAAATAA GGATACTGAG	19860
GTGATTTTTC GAGCCTTTGC TGCTAGTCAG GAGCAAATGA ATGAGGTGA AGGGATTGTT	19920
GAGTCTTTCA TCCAAGAAAA CATTCATCC GAAATCTGG GAAAGGCGAT TGATTATGGT	19980
GATGCAGAAA ATCCTCTGGA AGAAAAATA CACCAGGACT TACGCTTACA GTTTGTTAAC	20040
TTGAATGATG AGTTAGATTT GATAAAAACA CTAGAATTTG TCCGTTTGAT TGTGGATTTA	20100
AATAGACATC CTCATCTCTA CACACAGATT GCTGGGATTA GTGCAGGAAT TCCTCAAATC	20160
AACCTAGTTG AAACCGTCTA TGTGAACAT TAAAAAATG GTTATTTGTT AGCAGATGTT	20220
ACAGAAATTT CTAAGGCTGC ACATTATTAC ACAGATAGGT TGAAGGAGTG GAATGAGTCC	20280
TTGATATATT CAATTGATAA GATTAAGGAG CACACAGGAC AACAATTTCT TGGAAAATTA	20340
GAGAAATGGA TAGAGGAGGT TAAAAATGTC AAAGGAACTT AATATTTTAC AGATAGGACT	20400
TGCCAATTGG GAAAACTACT ATGACATACC TGAAAAATG AGTTGGTATT ATTTTACCC	20460
AAACTCATCA AAAGCCCTTC GTGAAATAAT TGAAAAAGAG GATATTAACC GTTTTCATGC	20520
AGTTTTTAATA GAAGATGGTC AGTATCCAG AGACTTATTT TCCTATGTAA AATATTTTGA	20580
ACCTTATACT TTATTTTATA ACCAGAATCT ACAAATAAAT GATAGAGAGG TTGTGGATT	20640
TCTAAAAAAA CGATGTGCAC AAGCAATTGA TTTTTTAAGT CCCCACAAC TAATCAATGA	20700
TTTAAGTAAA TCTCTTTTTC GCGGTGGGTA TGGTGATAAA CTCTTTCCTC CGACGATACA	20760
AGTCAATCCA AATTTTACAG GAGCTATTTT TTATCAAGGA TTGGATTATG TCAGTTTGA	20820
AGGTGAGTTT GGGCAAGATT TTGCCAGCT TGCCTATTGG GCTTATAATA TTATGGTGCA	20880
AAAAACACTC CCTATTGAGT TGTGGCTTGA ATATGAGAAG GAAGGCAATT GTGACTTTCG	20940
TTTAGTAATC CGTAAAAATG GGAGTGGGTC TGTGATGAT TTCTTTGAAG AAGTAATAGT	21000
ATCTGAAAAA GACTTGGAGC AAGCACTTTT TATGGATAGT CGAGACGGAG ACTACTTTCT	21060
CTCGATATCT GTTGAAGCAA GAGGTCGTGG AACTATCAAA CTAGGTAATC TTCACCAACG	21120
ATGGAGTCGA AAACAATTTG GTAAGTTTGT ACTTGGTGGA AATATCCTAC ATGATTCCAA	21180
GCGTGATGAA ATAAACTATT TCTTCCATCC AGGTGATTTT AAACCGCCTT TGACTGTCTA	21240

587

TTTTCGAGGT TATCGACCTG CAGAAGGATT CGAGGGTTAC TTTATGATGA AAACCTCTTG	21300
ATGTCCCTTC ATTTTATTTT CTGATCCACG TTTAGAGGGG GGAGCTTTTT ATCTCGGAAC	21360
GGATGAGCTA GAGGGAAAAG TAAAGGATAC GATCACTCAC TATCTTGATT ATTTAGGCTT	21420
TGATCATAAG GATTTGATTT TATCAGGTCT TTCTATGGGA ACGTTTCCGG CTCTCTATTA	21480
TGGTGCTTCT TTTGAACCCC ATGCCATCAT AGTTGGTAAG CCCTTGGCTA ATTTAGGAAC	21540
TATAGCTAGT CGTGGACGTT TGGACGCACC GGGTGTCTCT AACTTAGCTT TTGATTGTTT	21600
AATTCATCAT ACAGGTGGGA CAAGTTCTCA AGATATGACG GAGTTGGATC AGCGTTTTTG	21660
GAAAATTTT AAACAAGCAA ATTTTCAAA GACAACCTT GGTATATCCT ATATGAAAGA	21720
TGAAGAAATG GATCCACAAG CCTATGAACA ATTAGTGTCT TATCTGTGTA ATACAGGTGC	21780
GAAGATTTTA TCTAAAGGAA CTGCTGGACG ACACAATGAT GATACAGATA CCAATATTTT	21840
TTGGTTTTTG CACTTTTATA GAATGGTCTT AGAGACTGGT TTTGGAAGGG AGAAAAGATG	21900
ATTATTACAC AGAGACAGTC TATTCATTGG GGAGAAGTTG GTGGGACTTA TATGTATGGA	21960
ACAACTGTAT CTTATTACCC TGACAAAAGT GTTCGTCTGT ATAATCCTCT ATTGCCATCT	22020
GGTGAGATTC TAAAGACTTG GTTTTCTAGT GTCAATTACC AGGCTGCACG AACCCAACTT	22080
CAGCTTCCCT TATTAAAAAG AAAGCAGGAG TATCAACTAT CACTGGTTTT TGACTGTCAG	22140
CCTGAAAATG GAGTTTATAC CAAGATAACT TTTTTTGACC GCTATGGTGA TATTTTAGAA	22200
AAAAAGGTAG AAAAAGTGAA AGATTTCATA TTTACTTATC CAGAAGATAG TTATACTTAT	22260
CGAGTTTCTC TTTTAAGTGC TGGATTGAG TCCTTAACTT TTTATCATTT TTCTATCAAG	22320
GAGATCAGAA GTGTTTAGAC GTTTAGGTCA AGATTTCAG CTTAGGAAAAG TGAAAAGAT	22380
TTTAAAGCAG ATTAATGCCC TGAAAGGCAA GATGTCCTCT CTTTCGGATC AAGAATTAGT	22440
AGCTAAAACA GTAGAGTTTC GTCAGCGTCT TTCCGAGGGA GAAAGTCTAG ACGATATTTT	22500
GTTTGAAGCT TTTGCTGTGG TGCGTGAAGC AGATAAGCGG ATTTTAGGGA TGTTTCCTTA	22560
TGATGTTCAA GTCATGGGAG CTATTGTCAT GCACTATGGA AATGTGCTG AGATGAATAC	22620
GGGGGAAGGT AAGACCTTGA CAGCTACCAT GCCTGTCTAT TTGAACGCTT TTTCAGGAGA	22680
AGGAGTGATG GTTGTGACTC CTAATGAGTA TTTATCAAAG CGTGATGCCG AGGAAATGGG	22740
TCAAGTTTAT CGTTTCTAG GATTGACCAT TGGTGTACCA TTTACGGAAG ATCCAAAGAA	22800
GGAGATGAAA GCTGAAGAAA AGAAGCTTAT CTATGCTTCG GATATCATCT ACACAACCAA	22860
TAGTAATTTA GGTTTTGATT ATCTAAATGA TAACCTAGCC TCGAATGAAG AAGGTAAGTT	22920
TTTACGACCG TTAACTATG TGATTATTGA TGAAATTGAT GATATCTTGC TTGATAGTGC	22980

588

ACAACTCCT CTGATTATTG CGGGTTCTCC TCGTGTTCAG TCTAATTACT ATGCGATCAT	23040
TGATACACTT GTAACAACCT TGGTCGAAGG AGAGGATTAT ATCTTTAAAG AGGAGAAAGA	23100
GGAGGTTTGG CTCACTACTA AGGGGGCCAA GTCTGCTGAG AATTTCTTAG GGATTGATAA	23160
TTTATACAAG GAAGAGCATG CGTCTTTTGC TCGTCATTTG GTTTATGCGA TTCGAGCTCA	23220
TAAGCTCTTT ACTAAAGATA AGGACTATAT CATTTCGTGA AATGAGATGG TACTGGTTGA	23280
TAAGGGAACA GGGCGTCTAA TGGAAATGAC TAAACTTCAA GGAGGTCTCC ATCAGGCTAT	23340
TGAAGCCAAG GAACATGTCA AATTATCTCC TGAGACGCGG GCTATGGCCT CGATCACCTA	23400
TCAGAGTCTT TTTAAGATGT TTAATAAGAT ATCTGGTATG ACAGGGACAG GTAAGGTCGC	23460
GGAAAAAGAG TTTATTGAAA CTTACAATAT GTCTGTAGTA CGCATTCCAA CCAATCGTCC	23520
GAGACAACGG ATTGACTATC CAGATAATCT ATATATCACT TTACCTGAAA AAGTGTATGC	23580
ATCCTTGGAG TACATCAAGC AATACCATGC TAAGGGAAAT CCTTTACTCG TTTTGTAGG	23640
CTCAGTTGAA ATGTCTCAAC TCTATTCGTC TCTCTTGTTC CGTGAAGGGA TTGCCATAA	23700
TGTCCTAAAT GCTAATAATG CGGCGCGTGA GGCTCAGATT ATCTCCGAGT CAGGTCAGAT	23760
GGGGGCTGTG ACAGTGGCTA CCTCTATGGC AGGACGTGGT ACGGATATCA AGCTTGGTAA	23820
AGGAGTCGCA GAGCTTGGGG GCTTGATTGT TATTGGGACT GAGCGGATGG AAAGTCAGCG	23880
GATCGACCTA CAAATTCGTG GCCGTTCTGG TCGTCAGGGA GATCCTGGTA TGAGTAAATT	23940
TTTTGTATCC TTAGAGGATG ATGTTATCAA GAAATTTGGT CCATCTTGGG TGCATAAAAA	24000
GTACAAAGAC TATCAGGTTT AAGATATGAC TCAACCGGAA GTATTGAAAG GTCGTAAATA	24060
CCGGAAACTA GTCGAAAAGG CTCAGCATGC CAGTGATAGT GCTGGACGTT CAGCACGTCG	24120
TCAGACTCTG GAGTATGCTG AAAGTATGAA TATACAACGG GATATAGTCT ATAAAGAGAG	24180
AAATCGTCTA ATAGATGGTT CTCGTGACTT AGAGGATGTT GTTGTGGATA TCATTGAGAG	24240
ATATACAGAA GAGGTAGCGG CTGATCACTA TGCTAGTCGT GAATTATTGT TTCACTTTAT	24300
TGTGACCAAT ATTAGTTTTC ATGTTAAAGA GGTCCAGAT TATATAGATG TAACTGACAA	24360
AACTGCAGTT CGTAGCTTTA TGAAGCAGGT GATTGATAAA GAACTTCTG AAAAGAAAGA	24420
ATTACTTAAT CAACATGACT TATATGAACA GTTTTACGA CTTTCACTGC TTAAAGCCAT	24480
TGATGACAAC TGGGTAGAGC AGGTAGACTA TCTACAACAG CTATCCATGG CTATCGGTGG	24540
TCAATCTGCT AGTCAGAAAA ATCCAATCGT AGAGTACTAT CAAGAAGCCT ACGCGGGCTT	24600
TGAAGCTATG AAAGAACAGA TTCATGCGGA TATGGTTCGT AATCTCCTGA TGGGGCTGGT	24660
TGAGGTCACCT CCAAAAGGTG AAATCGTGAC TCATTTTCCA TAAAAGGAGA AAATATGACA	24720
ATTTACAATA TAAATTTAGG AATTGGTTGG GCTAGTAGCG GTGTTGAATA CGCTCAAGCC	24780

589

TATCGTGCTG GTGTTTTTCG GAAATTAAAT CTGTCCTCTA AGTTTATCTT TACAGATATG	24840
ATTTTAGCCG ATAATATTCA GCACTTAACA GCCAATATTG GTTTTGATGA TAATCAGGTT	24900
ATCTGGCTTT ATAATCATTT CACAGATATC AAAATTGCAC CTAAGTAGCGT GACAGTGGAT	24960
GATGTCTTGG CTTACTTTGG TGGTGAAGAA AGTCACAGAG AAAAAAATGG CAAGGTTTTA	25020
CGTGTATTCT TTTTGACCA AGATAAGTTT GTAACCTGTT ATTTGGTTGA TGAGAACAAG	25080
GACTTGGTTC AACATGCCGA GTATGTTTTT AAGGGAAACC TGATTCGGAA GGATTACTTT	25140
TCTTATACGC GTTATTGTAG CGAGTATTTT GCTCCCAAGG ACAATGTTGC AGTCTTATAC	25200
CAACGAACCT TTTATAATGA AGACGGGACT CCAGTCTATG ATATCTTGAT GAATCAAGGG	25260
AAGGAAGAAG TTTATCATTT CAAGGATAAG ATTTTCTATG GAAAGCAAGC TTTTGTGCGT	25320
GCCTTTATGA AATCTTTGAA TTTGAATAAG TCTGATTTGG TCATTCTCGA TAGGGAGACA	25380
GGTATGGAC AGGTGTGTT TGAGGAAGCA CAGACAGCAC ATCTAGCGGT AGTTGTTTAT	25440
GCGGAGCATT ATAGTGAAAA TGCTACAAAT GAGGACTATA TCCTTTGGAA TAACTATTAT	25500
GACTATCAGT TTACCAATGC AGATAAGGTT GACTTCTTTA TCGTGTCTAC TGATAGACAA	25560
AATGAAGTTC TACAAGAGCA ATTTGCCAAA TATACTCAGC ATCAGCCAAA GATTGTTACC	25620
ATTCCTGTAG GCAGTATTGA TTCCTTGACA GATTCAAGTC AAGGGCGCAA ACCATTTTCA	25680
TTGATTACGG CTTACGCTCT TGCCAAAGAA AAGCACATTG ATTTGGCTGT GAAAGCTGTG	25740
ATTGAAGCTC ATAAGGAGTT ACCGGAACCT ACCTTTGATA TCTATGGTAG TGGTGGAGAA	25800
GATTCTCTGC TTAGAGAAAT TATTGCAAAT CATCAGGCAG AGGACTATAT CCAACTCAAG	25860
GGGCATGCGG AACTTTCGCA GATTTATAGC CAGTATGAGG TCTACTTAAC GGCTTCTACC	25920
AGCGAAGGAT TTGGTCTGAC CTTGATGGAA GCTATTGGTT CAGGTCTACC TCTAATTGGT	25980
TTTGATGTGC CTTATGGTAA TCAGACCTTT ATAGAGGATG GGCAAAATGG TTATTTGATT	26040
CCAAGTTCAT CTGACCATGT AGAAGACCAA ATCAAGCAAG CTTATGCCGC TAAGATTTGT	26100
CAATTGTATC AAGAAAATCG TTTGGAAGCT ATGCGTGCCT ATTCTTACCA AATTGCAGAA	26160
GGCTTCTTGA CCAAAGAAAT TTTAGAAAAG TGGAAGAAAA CAGTAGAGGA GGTGCTCCAT	26220
GATTGAACTT TATGATAGTT ACAGTCAAGA AAGTCGAGAT TTACATGAAA GTCTAGGCGC	26280
TACTGGTCTT TCTCAACTTG GAGTGGTCAT CGATGCAGAT GGTTTTCTGC CTGATGGTCT	26340
GCTTTCTCCT TTTACCTATT ATCTAGGTTA CGAGGATGGA AAACCTCTCT ATTTTAATCA	26400
AGTTCCCGTT TCAGATTTTT GGGAAATTTT AGGAGATAAT CAGTCTGCTT GTATTGAAGA	26460
TGTGACGCAG GAGAGGGCTG TCATTCATTA TGCTGATGGA ATGCAGGCTC GCTTGGTTAA	26520

590

ACAGGTAGAC TGGAAAGACC TAGAAGGTCG AGTACGTCAG GTTGACCACT ACAATCGCTT	26580
CGGAGCTTGT TTTGCTACAA CGACTTATAG CGCAGATAGC GAGCCGATTA TGACAGTTTA	26640
CCAAGATGTC AATGGTCAAC AAGTTTACT GGAAAACCAT GTGACGGGTG ATATCTTATT	26700
GACTTTGCCA GGTCAGTCCA TGCCTTACTT TGCAAATAAA GTTGAATTTA TCACCTTCTT	26760
TTTGCAAGAT TTGAAATAG ATACCAGTCA GCTTATCTTT AATACTCTAG CGACTCCTTT	26820
CTTGCTTTCC TTCCATCATC CAGATAAATC TGGCTCGGAT GTCTTGGTAT GGCAGGAACC	26880
TCTCTATGAT GCCATTCCAG GTAATATGCA GTTGATTTTG GAAAGTGATA ATGTGCGTAC	26940
TAAGAAGATC ATCATTCCTA ATAAGGCGAC TTATGAGCGC GCTTTAGAGT TAACTGACGA	27000
GAAATACCAT GATCAGTTTG TGCACTTGGG TTATCATTAC CAGTTCCTAAC GTGATAATTT	27060
CCTAAGACGA GATGCCTTAA TCTTGACCAA TTCAGATCAG ATTGAGCAAG TAGAAGCAAT	27120
CGCAGGAGCC TTGCCTGATG TCACTTTCCG TATTGCAGCG GTGACAGAGA TGTCTTCTAA	27180
GCTCTTAGAC ATGCTTTGCT ATCCTAATGT GGCCCTTTAC CAGAACGCTA GTCCACAGAA	27240
GATTCAGGAG CTGTATCAAC TGTCGGATAT TTAATTTGAT ATAAACCACA GTAATGAGTT	27300
GCTACAGGCA GTGCGTCAGG CCTTTGAGCA CAATCTCTTG ATTCTTGGCT TTAATCAGAC	27360
GGTGCACAAT AGACTTTATA TCGCTCCAGA CCATCTATTT GAAAGTAGTG AAGTTGCTGC	27420
TTTGGTTGAG ACCATTAAAT TGGCCCTTTC AGATGTTGAT CAAATGCGTC AGGCACTTGG	27480
CAAACAAGGC CAACATGCAA ATTATGTTGA CTTGGTGAGA TATCAGGAAA CCATGCAAAC	27540
TGTTTTAGGA GGCTAACATG TCAGAGGAAG ATTTATTTTA CAAAGACGTT GAAGGCCGCA	27600
TGGAAGAGTT GAAACAAAAA CCCATCAAGA AGGAAAAAGA AAGCCGAGGG GAAAGATTA	27660
GTAAGACTTT TTCACTTTTA CTGGGTTTGA TGATTCTGAT TGCTTTGCTC TTTACTTTGC	27720
TGGAATTTT GAGGTAGATC TATGATTGAA ATACTAATTG TTTTAGCTAT TATCCTATCT	27780
CTTGCTTTGA TTGTATTGGT AACTATACAA CCCCCTCAA ATCAACTATT TTCCATGGAT	27840
GCCACTAGTA ATATTGGTAA ACCAAGCTAC TGGCAGAGCA ACACCTTGGT CAAGGTGCTC	27900
ACTTTATTGG TGAGTTTGGC TTTATTTATT CTACTATTAA CCTTTATGGT GATTACTTAT	27960
AAATAAAAGA AAATTCAGA TATTCACCTT TTGTGGATTG GTCTGAAGTT TTCTTTTTTA	28020
TACTCAATGA AAATCAAAGA GCAAACTAGG AAGCTAGCCG CAGGCTGCTC AAAACACCGT	28080
TTTGAGGTTG TAGATATAAC TGACGAAGTC AGCTCAAAAC ACCGTTTGA GGTGTAGAT	28140
ATAACTGACG AAGTCAGCTC AAAACACCGT TTTGAGGTTG TGGATAGAAC TGACGAAGTC	28200
AGCTCAAAAC ACCGTTTGA GGTGTGGAT AGAACTGACG AAGTCAGCTC AAAACACCGT	28260
TTTGAGGTTG TGGATAGAAC TGACGAAGTC AGCTCAAAAC ACCGTTTGA GGTGTGGAT	28320

591

AGAACTGACG AAGctCAGTA ACATATATAC AGCAAGGCGA CGCTGACGTG GTTTGAAGAG	28380
TATTACTGTC TATATTTTGT GTAAAAATCA ACTTTTACTT GGATGAAGGT TTTGGCTTCA	28440
CGTAGGAGTT GAAGAAGGGT GGCGCGGGTT TCAAATTCCTT CTCTTGCTCTT GGGCAGACTG	28500
CGGTTCCGGA AGACTTCCAG ATAACGTTCA ATTTTCATCTA GCAAATCAGA AGCAGGATTG	28560
GTCTGGCTCA GTTGACCTGC AATTTTGTGA AAGAGTTGCG CTAAGATCAG GCTTTCAGTG	28620
GCGGCAAGGT GACAAGTGTT AATCTGTTGG GCCATGTTTC TCAGGATACG ACTTTGTCGC	28680
TGTCTCATCT CAAAGTAGTG GATATGGTAG TCTGTCTGGT GAAAGAGGTG GTCAGAGTGA	28740
TCCAAATAGA CCAGTCTGAG GGCTTCTTTC AAAAGCGTGT CTAATTCTGC TACCAGCTGT	28800
GCTCGGTTGC GTCCGTCTCC TCTGGATAAA TAGTATTTGA AGCGCTGGAG GATATCTTTT	28860
AACTTTCTT CCACCAGCGT GTGGTAGTGC TGGATTTCTT CTTCTCGTGA AGGCATATAG	28920
AGATTAACAA GCAAGGCAAA TCCTGTACCA ATAGCAAAGA GAAGGAATTC ATTGACTAGA	28980
AGGTCTGGAG AGGTTGACTC TTGAACCAAG AGATGGCTAA CCAAAACAGT GCTTGGTGTG	29040
ATGCCAATTT CCCAGCCCAT CTTGTAGGCT AAAGGAACGT AGAAGGCCAG ATAGAGGCCG	29100
AGACTCCAGA TATGAAATCC GCTCAAGTGA AAAGCTAGAA CACCGATAGC CAGAGCTAGA	29160
AGCATAGAAA AAAGACGATT GCGAGCCAGT TTTAAAGTAC TTCTACGCGT ATCAGATAGG	29220
CTCAAGAGAG CGATAATTCC AGCCGAAACT GCTGACGAAA GATTGAGAAA ATAAGCAAGC	29280
AGGCAGGCAA GACAGGTAGC TAAGATGAGC TTGGTCGTAC GTTGGCTAAT AGACATAAGA	29340
ATTTCTTAAT AAGTTAGAAT AAAAGCGTAA AAGACAAGAC ATGAGCAGGC TTGCCTTGAT	29400
GAGTTATTTT TTACGGGTTG CTGCGTATTC GGCAACGGCG GTAAAGAGGA CATCTGTAGA	29460
AGAGTTAAGG GCTGTTTCAC ATGAGTCTTG GATGACACCA ATCACAACAA CAACCCCAAC	29520
AATTTGTATG GCAATATCGT TAGAAATACC GAAAAGGCTA CAAGCAACTG GGATAAGAAG	29580
GAGGGAACCT CCGGCAATAC CTGAAGCATC ACAGGATGAG ATAGCTGCTA CCACACTGAG	29640
GACAAAGGCT GTGGCAAAGT CAACAGGAAT TCCAAGAGTG TTAAGTGCAG CAAGGGTCAA	29700
AAGGTTAATG GTAATCGCTA CTCCAGCCAT ATTGATAGTA GAACCGAGTG GGATAGAAAC	29760
AGAATAGGTA TCTGGGTGTA GTCCAAGTGC ATGGCAGAGT TTCATGTTGA CAGGAATGTT	29820
AGTCGCAGAA CTACGAGTGA AAAAGGCTGT CACACCGCTG ACACGGAGGC AGTTCCAAAC	29880
TAGAGGTAA GGATTGCGTC TCATAAAGAA GAAGGCAATC AAAGGGTTGA CCACAGGGGC	29940
AACAAAAAGC ATAGTCGTTA CTAATAGAAC CAATAAAATA CCGTAGTTGG CAAGGCTTCC	30000
GACTCCCTTG TCAGAAATGG TTTTAAAAAC AAGACCAAGG ATTCCAAATG GAGCCAGATT	30060

592

GATGATCCAT TCGACAATTT TAGAAGTCAC GTCAGCGATA GTTTTTAGCA ATTCTTGACT	30120
ATTTTTACTG GCTTCTCTCA TAGCGATTCC AAAAATGACT GCCCAAGATA AGATTCTAAT	30180
ATAGTTAGCA GTAAGCAGGG CGTTGACTGG GTTGTCACC AGTTTGAGCA AGAGGTGCT	30240
GAGAACCCTGC CCAATCCCAT CTGGTGGTGC AATTTCAGTA TTGGCACTAT TTGGGGTAAT	30300
TTCAATAGGG ACGATGAAAT TTGCTAGTAC AGCTACAAGA GCAGCGGCGA AAGTCCCTAT	30360
CATAGGATAT ACAAGAAAAC AACAGTTTTT ATATTGCTAT CTTGTCCCTT TTGATGTTGG	30420
GAAAGGGCAT TGGCAACGAG AGCAAAGACT AGGATAGGAG CAACAGCTTT TAGACCTCCA	30480
ACGAATAAAT CCTCGAGTAG CCCAATCCCT GAGAGATTAG GAAGGGTCAG TCCTAGGATT	30540
CCCCACAAAG CATACCAATC AAGATACGCT TGACAAGGCT TGCCCTATTTC CAAGCATGAA	30600
TGATTCTTTT CATAATAATC TCCTTTTGT GTAGTGATTA TGATTATAGT ATAAATGATA	30660
GACAAAATCA AGAATTTTCT GTCTATTTTT TGAATATTTA TGGAGAATGA GACTGATGAA	30720
AATATGGTAT AATGAAATA AGGAGTTTTA TATGCAAAA TTTATTCAGG CTTATATTGA	30780
AAAGCTAGAT GTGACAACCA TTATCGAGAA TATTCTAACC AAGGTCATTT CTCTTTTACT	30840
GCTTTTAATT GTATTTTATA TTGCTAAAAA AATGCTTCAT ACCATGGTGC AGAGAATGT	30900
CAAACCTTCT CTAATAATGT CTCGTCATGA TGTGGACGC CAAAAAACCA TCTCACGTTT	30960
ACTAGAAAAT GTGTTTAATT ATACGCTATA TTTCTTTTTA CTCTACTGCA TTTTGTGAT	31020
TTTAGGTTTG CCAGTTTCTA GTTTGCTGGC TGGAGCTGGT ATTGCTGGGG TAGCGATTGG	31080
TATGGGAGCC CAAGGCTTTC TGTCTGATGT CATCAATGGC TTTTTCATCC TCTTTGAACG	31140
TCAACTGGAT GTGGGAGATG AGGTCGTTCT GACAAATGGA CCGATTACTG TATCGGGTAA	31200
GGTTGTCAGT GTGGGAATTC GTACGACACA GCTTCGTAGC GAGGAGCAAG CCCTTCACTT	31260
TGTCCCTAAC CGAAATATCA CAGTTGTTAG CAATTCTCTCA CGCACAGACT AGACCTGTTA	31320
TTTTAAGTAA TTTGTGGTAC AATAGAGGGA GTTTAATAAG GAGAAAAGAT GGTTTTAGAA	31380
AAGCAGTTGG GCAATGGTTG TACCTGGATA GACCTAGACC TAGGAAAGTT GAATAAACTA	31440
GAAGACCTTT CTGAAATTTA CGGTTTGGAC AAGGAAACCA TTGAATACGC ACTGGATAGA	31500
AACGAGCGCG CCCACATGGA CTACCACCGT GAAAGTGAGA CGGTTACCTT TATCTATAAT	31560
GTCTTAGACG TAAAAAGGA CAAGGCCTAC TATGAGACTT TTCCCATGAC CTTTATTGTC	31620
GAGCATCGTC GCCTGATTAC CATTAGTAAT ACCAAGAACG CCTATGTCAT TGAACAGATG	31680
ACTCGTTATC TGGAGAACCA TGACACGCTT TCGATTTATA AGTTTCTCTT TGCCAGTCTG	31740
GAAATCATCA GCAATGCCCTA CTATCCTGTC ATTGAGCAGA TGGACAAGAG TAGGGATGAG	31800
GTCAATGACC TCTTGCGCCA GCGAACTACC AAGAAAAACC TCTTTGTCCT GTCTGATTTG	31860

593

GAGACTGGTA TGGTTTATCT GACGGCAGCT GCCAAACAAA ATCGGATTTT GTTAGAGCAT	31920
ATCAAGGTC ATGCCTTGTA TCGTAGTTTT GATGAGATTG AGAGAGAACA GTTTGATGAT	31980
GCCATGATTG AGGCTCATCA GCTGGTATCC ATGACAGACC TAATCTCTCA GATTTTACAG	32040
CAGCTTTTCTAG CCTCTTACAA CAATATTCTA AACAAATATC TGAATGACAA TTTGACAACC	32100
TTGACTATCA TTTCAGTCTT GCTAGCTGTT TTGGCAGTCG TGACAGGCTT TTTCGGAATG	32160
AATGTTCCCT TACCTTTAAC AGATGAGCCC CATGCTTGGC TCTATATCAG TTTGGCTAGT	32220
GCAGGTTTGT GGATTGTTTT ATCCTTGTTA CTAAGGAAAA TTGCGAAAAA AAGTTAAGAA	32280
AAGGAGCCAG AATGGCGATT GAAAATTATA TACCAGATTT TGCTGTGGAA GCAGTCTATG	32340
ATCTGACAGT CCCAAGCCTG CAGGCGCAGG GAATAAAGGC TGTTTTGGTC GATTTGATA	32400
ATACCCTCAT TGCTTGGAAC AACCTTGATG GAACGCCAGA GATGAAGCAA TGGCTACATG	32460
ACCTTCGGGA CGCGGGTATT GGCATTATCG TAGTGTCAAA TAACACCAAA AACGCGTTC	32520
AACGAGCAGT TGAGAAATTT GGGATTGATT ACGTTTACTG GGCCTTGAAG CCCTTCACAT	32580
TTGGTATTGA CCGTGCTATG AAGGAATTCC ACTATGACAA AAAGGAAGTG GTCATGGTTG	32640
GTGACCAACT CATGACAGAT ATACGAGCAG CCCACCGTGC AGGGATTTCGG TCAATTTTAG	32700
TCAAACCCCTT GGTCCAACAT GACTCAATCA AAACGCAGAT TAACCGAACT CGTGAGCGTC	32760
GTGTTATG	32768

(2) INFORMATION FOR SEQ ID NO: 72:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14872 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

CCAGTCACAA AGAAATTGAG CGCGTTCAGC TGAGGATGCA CTATGATGCA AGCTACATTT	60
CATTTGATGG GATATTAAGA AAGGAGATTT TCATGACACT TTTAGATGTA AAACACGTTT	120
AAAAAATTTA TAAACACGT TTTCAGGGCA ACCAAGTAGA AGCCCTCAAG GATATTCACT	180
TTACCGTAGA AAAGGGTGAC TACGTTGCCA TCATGGGTGA GTCTGGTTCT GGTAAATCAA	240
CTCTTCTCAA TATTCTAGCT ATGTTGGATA AACCAAGTCG TGGTCAGGTT TACTTGAATG	300
GAACAGACAC CGCAACTATT AAAAATTCAC AGGCTTCTAG TTTCCGGCGT GAAAAGCTAG	360
GATTTGTCTT CCAAGACTTT AACTTGCTAG ATACTCTGTC TGTTAAGGAC AATATCTTGC	420

594

TTCCGCTTGT CTTGTCAAGA AGACCTATAA CGGAGATGAT GAAGAAATTG GTGGTGACAG	480
CTGAGAATCT GGGTATTAAC CAATTGCAAG AGAAGTACCC TTACGAGATT TCTGGTGGTC	540
AGAAACAGCG TGTTAGCAGTA GCCCGCGCCA TCATCACAGA ACCTGAAATT CTCCTTGCGG	600
ACGAGCCAAC AGGAGCCCTT GATTCCAAGT CATCTGCAGC CTTACTTGAT GTCTTTAATG	660
AAATCAATGA GCGTGGGCAA ACCATCCTCA TGGTAACCCA CTCAACAGCA GCTGCTAGCA	720
GGGCCAAGCG TGTTCTCTTT ATCAAAGACG GCATTCTTTA CAACCAAATC TACCGTGGAG	780
AGAAGACAGA GCGTCAGATG TTCCAAGAAA TCTCTGATAC CTTGACTGTC ATGGCAAGCG	840
AGGTGAATTA GTATGTTTCG ATTAACCAAT AAGTTAGCGG TATCGAACTT GATTA AAAAC	900
CGCAAACCTCT ACTATCCCTT TGCCTGGCT GTTCTCTTGG CAGTCACCAT CACCTATCTC	960
TTTTACTCCC TAACCTTCAA TCCAAAGATT GCGGAAATCC GTGGAGGAAC CACCATTCAA	1020
GCAACACTTG GATTTGGTAT GTTTGTCGTT ACCCTTGCCT CACCATTTATC GTCCTCTATG	1080
CCAATAGTTT TGTCTGAAA AACCGTTCCA AGGAACTGGG TATATATGGC ATGTTAGGCT	1140
TGGAGAAGCG CCATCTAATC AGTATGACCT TTAAGGAGTT AGTGGTATTT GGGATTCTAA	1200
CTGTTGGAGC GGGTATCGGT ATTGGAGCCT TGTTTGACAA GTTAATTTTC GCTTTCCTGC	1260
TCAAATAAT GAAACTGAAG GTTGAGCTGG TTGCTACCTT CCAAATGAAT GTTGTCAATG	1320
CAGTACTTGT TGTCTTTGGA TTGATTTTCC TAGGCCTCAT GTTCCTGAAT GCTCTTCGAA	1380
TCGCCCCGAT GAATGCCCTC CAGCTCTCGC GTGAGAAAGC AAGCGGAGAG AAAAGAGGTC	1440
GCTTCCTACC TCTCCAAACG ATTCTTGGTT CCATAAGTTT AGGGATTGGC TATTATCTTG	1500
CCCTTACGGT AACCGATCCT CTTACAGCCC TAACAACCTT CTTCTAGCT GTTTTGCTGG	1560
TTATCTTTGG TACTTATCTA TTGTTAATG CAGGGATTAC AGTCTTCCTA CAAATCTTAA	1620
AGAAAAACAA GAAATACTAT TACCAACCTA ATAACCTCAT ATCTGTTTCC AACTTGATTT	1680
TCCGTATGAA GAAAAATGCG GTTGGACTAG CAACCATCGC TATTTTGTC AATATGGTTT	1740
TGGTAACCAT GTCAGCAGCG ACAAGCATTT TCAATTCCGC AGAAAGCTTT AAAAAAGTTC	1800
TAAATCCTCA TGATTTTGGG GTTTCAGGGC AAAATGTTGA AAAAGAAGAT TTGGACAAAC	1860
TCTTGAGCCA GTTTGCAAGT GACAAAGGTT ATAGTGTCAG AGAGAAAGAA GTACTTCGTT	1920
ACAGTAACTT TGGTATTGCA AATCAAGAAG GAACCAAGTT AACTATTTTT GAAAAAGGAC	1980
AAAACCGTGT CCAACCCACA ACAGTTTTC TGGTATTTGA CCAAAAAGAT TATGAAAATA	2040
TGACTGGTCA AAAACTGTCT CTATCAGGAA ATGAGGTCGG TCTCTTGCC AAAAAAGACG	2100
GACTGAAAGG ACAGAAAGCT CTAACCTCTA ATGATCATCA ATTTTCTGTC AAAGAAGAAT	2160
TTAATAAAGA TTTCATTGTG AACCATGTTT CAAATAAGTT TAATATCTTG ACTACTGATT	2220

595

ACAATTACCT TGTGTTCCCT GATTTACAAG CCTTTTGGGA TCAATTCCCA GATTCGGCTA	2280
TCTATAATCA GTTTTACGGT GGTATGAATG TAAATGTCAG TGAAGAAGAA CAACTCAAGG	2340
TCGCTGAGGA GTATGAAAAC TACCTCAATC AATTTAATGC TCAATTAGAC ACAGAAGGTA	2400
GCTATGTTTA TGGTAGCAAT CTAGCAGATG CTAGTTCTCA GATGAGTGCC CTCTTTGGTG	2460
GTGTCTTCTT TATCGGTATT TTCCTATCCA TTATCTTTAT GGTCCGAACT GTTCTGGTCA	2520
TCTACTACAA ACAAATTCTT GAAGGCTACG AAGACCGTGA ACGCTTTATT ATCTTGACAGA	2580
AAGTCGGTTC GGACCAAAAG CAAATCAAGC AAACCATCAA CAAACAGGTT TTAACGTGTT	2640
TCTTCCTTCC TTGCTCTTTT GCCTTCATAC ATCTCGCCTT TGCCTACCAT ATGCTTAGCC	2700
TGATTTTAAA AGTGATTGGT GTAGTGGATA CGACTATGAT GTTGATTGTG ACCTTGCTCA	2760
TCTGCGCTAT CTTCCTCATC GCCTATGTGC TGATTTTCAT GATTACTTCA AGAAGTTATC	2820
GCAAGATTGT GCAAATGTAA AAAAGATACC TCGACTTCAA AATCGAGGTA TTTCTTGAT	2880
TCTAAATGCT GAAAAGTTGT CCGAGCAGGA AGGTAACCTC CATGGTCAAG AGACCAATAG	2940
CAAGGTTCCG AATCATAGCT GTTTTGGTTG GGGCTTTTCC AAGTCTAGCA CTTGTGTAAC	3000
CAGTGAGAAG AAGGGCCACA CCGACAATAA GGACGGTAGC AGGGATGCGG TAATCACTTG	3060
GAAAAATGGT CACTGACAGC ATTGGAGGCA AACTTCTAAG GAAAAAGGCA ACGAAGCTAG	3120
AAATGGCAGC GTGCCAAGGA TTGGTAAATT CTTCACTC AATCCCATAT TTTTCTCTA	3180
CCAGAGCCTT GAGTGGATTT TTAAGAAAGA TCTTATTGGT CAAGAGTTGG GCAGAAGTTT	3240
TGAATTCTCC ATTTTGGATA TAAGCAGCAT AGAGGGATTT TTTGGCTAGT TCCCTATCTT	3300
GGTCTAGCAA GAGTTTTTCT CGCGAAACGG CAGCTTCCTC GGTATCTTTT GGAGTTGAAA	3360
CGGATACATA TTCTCCACCA GCCATTGAAA AGGCACCAGC TAAGATAGCC GTAAAACCTG	3420
ATAAAAAGAT AATCCAGATA TTGGTCGTGG CACTGGCAAC TCCGATAACC ACACCAGCAA	3480
TGGAAATAAT TCCATCGTTA GCATCAAGAA CACCCGCACG CAGGATATTT AAACGACCTG	3540
CAAAATTTGA ATCAATTTTC TGATTTGTTT CTGACGCTAA ATTTCAAGTT CAAGTTAGCC	3600
ATCAAGAAGT CTTCTCTGGG TGACTTGTAG TCCAAGCATT TTTTAGGATA GTTGTTAATC	3660
CACTTTTCGA TGAATGCGAC TTCTTTGGGA GTCATTTTCT TGGTCCCTT AGGTAACCAT	3720
CTACGAATGA GCCTGTTGTG ATTCTCATTA GTTCCCCTT CCCAAGAGGC ATAGGGATGT	3780
GCATAATAAA TGTGCTCCTC AGAAAATACA TTAGACAAGC GATTGAATTC CGTTCCATTA	3840
TCTGCCGTGA TGGAAAGAAT CTTGTGTGT TTTAAGATGA GTTTTAGAGC CTGATTGACC	3900
ACATCAGCAC TTTTATTTGG AATCAATCGG ATGATCTGAT GTCTACTTTT TCGATCCGTC	3960

596

AAGACAAGCA AGCAGTAGTT TTTCGCTCTC GTAAGTAGAA CTGTATCAAT CTCATAATGC	4020
CCATTCTCCA AGCGAAAATT GATAGCTTCA AGCCGCTGTT CGATGGATTG ACCAGCAGGT	4080
TTAAAGTTGG TGCTGGCCTG TTCTTAAGC GCTTTTCCTT TTCTAGGGTA AAGCAGATCC	4140
TGTTTGCTTA ACCCCAATTT TCCATGATGA ATCCAATAGT AAATGGTTGA AATTCCCACG	4200
TTAACCCCTT TAGCCATCAC CATCATTTCA GCGGAAAATT TTGGTTATG ATAGTGGAGA	4260
ATCTTTTCCT TTAGTTCCTT GGTCAAGCTT GATTTCCTGA CCGAGCGCTT GCGATTGTTT	4320
TCATAAGACT GTTGAGCATA GTCGGCAGAA TAAACCTCTT TGAAGCGCCC TTTTCCAAGA	4380
CATTGTCGGA CTGTCCCACG CTTGATTTC A GTGTGGATAG TTTGAGGAAC TTTTCCAAGC	4440
AGAGAGGCAA TTTCTCTATT TGATTTCCTT TCTTTTTCCT ATCTTTCGAT TAAGCGACGG	4500
CTATCGATTG TCAAATGTTT GCCTTTTGTA GTATAATGGT TTTGCATCTC TGTGCCTTTC	4560
TTGTGTTTGT GGTGGAACAA CAAGTATAAC ACAGAGGTGT TTTCTTATGC CTACAAGAGC	4620
TATCGGCTAG TTGAACCATC TAATTTTTCG GAGGCTGGG TGGCTAACTT' CATTATAGAA	4680
CTTTCATTTA CGAACATATA GTAAAATGAA ACAAGAACAG AACAAATCGA TCAGGACAGT	4740
AAAATCTATT TCTAACATG TTTTAGAAGC AGAGGTGTAC TATTCTAGTT TCAATCTATT	4800
ATATTTTGT TTTTATCAA AAAATACTTT ACAAGTTCTT AAAACATGA TATAGTAATA	4860
AAGCTTAGAA AATGAGATGA TGTTTCTAG CAAATATAAA CCCGAGTAAA AAATGCCTAC	4920
GGACAGGCAG GGTGAATGC CGAAGCGTGG TTGAAAAGCC ACATTATTGA TAGGGTTAAA	4980
AGCCTACTTT TATAAGTTGA TGTTAGGACA CTGTCTCTAA TTCATAAATT TTTAGTGTGG	5040
TGAAAGCACA CGTCATCTTG TGAAACGATC AATAAAGTAC GTAATATTG CTAAGTAGAGA	5100
GTTAGGAAAC ATCGGGAACA GACATACTCA ACAGAAACCA AAATAAACAC GTCAGAAGAT	5160
TGCAGAGCAG GTGAAAACCT GCTCTTTTTT CATGAGTCAA CCTTTAGTTC CTTAGTTTTT	5220
ATAAGTCTCT AAAAATATTG AAAGGAGTAT GTTTTGAAAG AGTTAGATCA AAACCAAGCC	5280
CCAATTTATG AGGCCTTGGT GAAGTTACGC AAGAAAAGGA TTGTTCCCTT TGATGTTCCA	5340
GGTCACAAGC GTGGACGGG AAATCCAGAA CTGTGCGAAC TCTTAGGAGA AAAATGTGTA	5400
GGCATTTGATG TCAATTCGAT GAAACCTTTG GATAATTAG GCCATCCTAT TTCGATTATT	5460
CGTGATGCAG AGGAGCTGGC TGCAGATGCT TTTGGAGCTA GCCATGCCTT TCTAATGATT	5520
GGTGAACAA CTTCATCGGT GCAGACTATG ATTCTGGCAA CCTGCAAGGC AGGAGATAAG	5580
ATTATTCTGC CACGAAATGT CCATAAATCT GCTATCAATG CGTTGGTTCT ATGTGGTGCC	5640
ATTCCCCTCT ATATCGAGAT GAGGTAGAT CCTAAGATTG GTATCGCTTT AGGTCTTGAA	5700
AATGACCGAG TAGCACAGGC CATAAAGGAC CATCCAGATG CTAAGGCTAT CCTAATCAAC	5760

597

AATCCTACTT ACTACGGCAT CTGTTTCAGAC CTAAAGGGGT TGACAGAAAT GGCTCATGAA	5820
GCTGGCATGA TGGTTTTAGT AGATGAAGCC CACGGAGCGC ATTTGCATTT CACTGATAAA	5880
CTTCCAATTT CTGCTATGGA TGCAGGGGCT GATATGGCAG CAGTTTCCAT GCATAAGTCT	5940
GGTGGGAGTT TGACCCAAAG CTCCATTTTA CTTATCGGGG AGCAGATGAA TTCTGAATAC	6000
GTTTCGTCAGA TAATTAACCT GACCCAGTCT ACATCTGCCT CTTACTTGTT GATGGCTAGT	6060
TTGGATATTT CACGTCGCAA CTGCGCCCTT CGTGGTAAAG AGTCGTTTGA GAAAGTCATT	6120
GAGCTATCTG AGTATGCCCC CCGTGAAATC AATGCTATCG GTGGCTACTA TGCCTACTCA	6180
AAAGAGTTAA TAGACGGTGT TTCGGTTTGC GATTTTGACG TAACTAAGCT GTCAGTTTAC	6240
ACTCAGGGTA TTGGCTTAAC AGGTATCGAG GTTTATGACC TCTTGCGAGA CGAATACGAC	6300
ATTCAGATCG AGTTTGGTGA TATCGGCAAT ATCTTGGCCT ATATTTCCAT CGGCGACCGC	6360
ATCCAAGACA TCGAGCGCTT GGTGGTGCT CTGGCTGATA TTAAGAGACT CTATTCAAGA	6420
GATGGAAAAG ATTTGATAGC AGGAGAATAT ATTCAGCCCG AGTTAGTGCT GTCTCCGCAA	6480
GAAGCCTTCT ATTCAGAAAAG AAAAAGTTTA ACTTTGGATG ATTCTGTTGG ACAGGTCTGT	6540
GGAGAATTTG TTATGTGTTA CCCTCCAGGT ATTCCTATCT TGGCTCCTGG TGAACGCATT	6600
ACACGAGAAA TTGTGCACTA TATCCAATTC GCCAAGGAAC GTGGTTGCTC CCTCCAAGGG	6660
ACGGAAGATC CAGAGGTCAA TCATATCAAC GTTATTAAGA GAAAGACAAA CTATAAGAAA	6720
AGTCAATAGT TTTATCTAAA CTATTTCTTA TTTCAAATTG ATGATTGGC GATGATTTTA	6780
GAGCACGGCA AAAAGCCCTT GAATTAGAAG CGGTCAATCG CTTAATTTCT ATCAGCTTAT	6840
CAAATCCTGC CTCAAGCCTT TTCTGAGGAT TAGGGTAGCG TGTCAAGAGT TGGTAGGTAT	6900
ATTCGTAATG CTTTCCAACG ATTTTATCCA ACTCAGGAAA GATGATATCA AGACAACGAG	6960
TGTATTGTAC TTTCCAATCA GACTGTTTTT TCTTGAGACG ATGAATATGT CTAGCCAGTA	7020
TTTTTAGTTC TACTTGCCGA TTATCGTGTG GAAATGTTC ACGATTGGGG TCAGAAAGAA	7080
GTTTAAGAGC GATGCCATGA GCGTCTTTCT TATCCGTTTT AGTTTTCGA AGTGATAATG	7140
ATTTGGCAAA TTTCTTGATG AGCAAAGGAT TGTAGGTGTA AACTTTATAT CCTTGTTTAT	7200
GCAGGAAGTT CAGTAGATTA AAGGCATAAT GTCCGTATTT TTCAAGAGCG ATGAGACAGT	7260
CTTGGTTGAG CTGTGGAAGA GACAGATCTA AGAGTTCAAA ACCAGCTTTA TTATTTGAAA	7320
AAGTGAGTGG TTTAAGAACA GTTTTTCCTG GAACATTCAA GGCTGTAACA TCGTGTTTAT	7380
TTTTCAGGAC ATCAATGCCC ACATAAAGCA TGGGAGTATC TCCAGATATA GTATTTCAAG	7440
TCTACTGGGT TATCCACGAA CTTTTGCTT TGTACCTTA GACGAGATAA AACGTCTATG	7500

598

CGTTATCAAA CTCATTACCA ATTGAAACAA AAAACTGTGG TTAGAGCCTT TCGGAAATCG	7560
TCAAGCGATT GGAGGAAATG AACTAATCCA CAGTGGCTTA TTCCAAGTAT ACCACTTGGG	7620
CTTTGGCAGT AGCTAACTGC GCTAAATATA ATATAAGGAG AAATAGATGG ATTTATGGTT	7680
TTCTGAAGTT CATACTCCAG ATGTCAAAT GTCTCTGAGA ACAGCCAAGC AACTTTACGC	7740
TGGAAAAAGT GAATGGCAGG ATATCGAAGT CTGGGATACG CCAGCTTTTG GGAAATACT	7800
GATTTTAAAT GGCCATGTCT TGTTCCTCAGA TCGGATGAT TTCGTCTACA ATGAAATGAC	7860
CGTTCACGTT CCCATGGCTG TCCACCCAAA TCCAAAGAAA GTATTGGTTA TTGGGGGTGG	7920
TGACGGCGGT GTTGCCCAAG TATTAACCCT CTATCCTGAA CTGGAGCAAA TTGATATTGT	7980
GGAACCGGAT GAGATGTTGG TCGAGGTCTG TCGTGAGTAT TTCCCAGACT TTGCTGCAGG	8040
GCTAGATGAT CCTCGTGTTA CCATTTACTA CCAAAATGGG CTACGCTTTT TCGGAAACTG	8100
CGAAGATGAT TACGATATTA TCATCAACGA TCGACAGAT CCATTTGGCC ATACGGAAGG	8160
ACTCTTTACC AAGGAATCTT ACGGCAATAG TTATCGAGCT CTGAAGGAAG ACGGCATCAT	8220
GATTTACCAG CATGGGAGTC CCTTCTTTGA CGAGGATGAG TCGGCCTGCC GAAGCATGCA	8280
CCGCAAGGTC AATCAAGCCT TTCCAATCAG TCGGGTTTAT CAGGCCATA TTCCAAC TAG	8340
CCCAGCTGGC TATTGGTTGT TTGGATTGTC ATCGAAAAA TACCACCCTG TCAAAGATTT	8400
TGACAAGGAA GGCTGGAAAA AACGCCAGCT TTTACAGAA TACTACACTG CAACTTACA	8460
CGTGGGAGCC TTTATGTTGC CCAAGTATGT TGAGGACATT TTAGAAGAAG AGGAAGGAAA	8520
AAAATGAGTC GTTTACTAGT TATTGGTTGT GGGGCGTTG CCCAAGTTGC TATTTCAAAG	8580
ATTTGTCAAG ATAGCGAAAC ATTTACAGAG ATTATGATTG CTAGCCGTAC CAAGTCAAAA	8640
TGCGATGACT TGAAAGCGAA GCTAGAAGGC AAAACAAGTA CTAAAATTGA AACTGCAGCA	8700
CTTGATGCTG ACAAGGTTGA AGAAGTGATT GCCCTGATTG AAAGCTACAA ACCAGAAGCT	8760
GTMTTGAATG TAGCTCTGCC TTATCAAGAT TTAACCATTA TGGATGCTTG TTTGGCAACA	8820
GGTGTTCACT ATATCGATAC AGCCAAC TAC GAAGCAGAAG ACACAGAAGA CCCTGAGTGG	8880
CGTGCTATCT ACGAAAAACG TTGTAAGGAA CTTGGTTTTA CAGCCTACTT TGACTACTCA	8940
TGGCAGTGGG CTTATCAAGA GAAATTCAAA GAAGCAGGCT TGACTGCTCT TCTTGGTTCT	9000
GGTTTTGACC CAGGTGTAAC TAGTGCTTTT TCAGCTTATG CCCTCAAACA CTATTTTGAT	9060
GAAATCCATT ATATCGACAT TTTAGACTGT AATGGCGGTG ACCACGGTTA TCCATTTGCA	9120
ACCAACTTTA ATCCAGAAAT TAATCTCCGT GAGGTTTCTG CGCCAGGTTT TACTGGGAA	9180
GATGGGAAAT GGGTCGAAGT CGAAGCTATG TCTATCAAGC GTGAGTATGA TTTCCCTCAA	9240
GTTGGACAAA AAGATATGTA TCTCCTTCAC CATGAAGAAA TCGAATCATT GGCCAAGAAC	9300

599

ATTCAGGTG TCAAACGCAT TCGTTTCTTT ATGACTTTTG GTCAATCTTA CTTGACGCAC	9360
ATGAAATGTC TTGAAATGT TGGACTCCTT CGTACGGATA CCATTAACCTT TAACGGCCAA	9420
GAAATTGTTT CAATTCAATT TTTGAAAGCC TTGCTTCCAG ATCCTGCCAG TCTTGGGCCA	9480
CGTACAGTCG GAAAAACCAA TATTGGATGT ATCTTTACAG GTGTCAAAGA CGGTGTCAAA	9540
AAGACTATCT ATATCTACAA TGTCTGCGAC CATCAGGAAT GTTACGCAGA GGTGGTTTCG	9600
CAAGCTATTT CTTATACGAC AGGAGTTCCA GCCATGATTG GGACAAAATT AGTCATGAAC	9660
GGAACCTGGA AACAAGCTGG AGTGTATAAC CMTGAGGAGT TAGATCCAGA TCCATTTCATG	9720
GAAGCTTTGA ATGAGTATGG TTTGCCATGG GTTGTGGTTG AAAATCCACA AATGGTGGAC	9780
TAATGAAGTT AGAACAAGTA CCAACACCAG CCTATGTTAT TGAAGTGGCC AAGTTAGAAG	9840
CTAATTGCCG CATTCTACAA TATGTACAAG AAGAGCCCG TTGCAAGGTC TTGCTTGCCC	9900
AGAAGGCATA TTCCCTCTAC AAAACTTATC CCTTGATTAG CCAGTATCTA TCAGGTACGA	9960
CAGCTAGTGG ACTCTATGAG GCCAAATTGG CAAGGAAGA ATTTCTCGGT GAAGTCCATG	10020
TATTTGCGCC TGCTTTCAAG GATGCAGACT TGGAGGAATT GCTAGAGATA ATGGACCATA	10080
TAGTCTTTAA CTCAGAGAGA CAGTTGCGTA AACACGGTCC GCGTTGTCTGA GAGGCTGGTG	10140
TCAGTGTGGG TTTGCGCCTC AACCTCAGT GTTCAACTCA AGGcAGATCA CGCGCTCTAT	10200
GACCTTTGTG CACCAGGTTT TCGCTTTGGA GTTACTATAG ACAAGATTCC GAGTGATTG	10260
CTAGATTGGG TTGACGGACT TCATTTTCAT ACCCTTTGCG AGCAGGGAGC AGATGATTTA	10320
CAAACAACCT TGAAAGCAGT AGAAGAACAG TTTGGTCCCT ACTTACATGA GGTAAATGG	10380
CTCAATATGG GTGGTGGTCA TCATATTACA AGAGAAGGT ACGATGTGGA TTTGCTGATT	10440
TCAGAAATCA AGCGTATCCG AAAAATTAC AATCTTGAAA TCTATATCGA GCCTGGTGAA	10500
GCCATTGCGC TTAATGCGGG TTATTTAGCA ACTGAGGTAT TAGATATTGT AGAAAACGGT	10560
ATGGAAATCT TGGTTTLAGA CGCCTCTGCG ACCTGCCATA TGCCGTGATGT ACTTGAGATG	10620
CCCTATCGTC CACCTTTGAG AAATGGCTTT GAGTCACAGG AAAAAGCCCA TACCTACAGA	10680
CTTTCTTCTA ATACCTGTCT GACGGGCGAT GTGATTGGTG ATTATAGTTT TGAAAATCCA	10740
GTCCAAATCG GAGACAGACT TTATTTTCAA GACATGGCCA TTTATCTTTT TGTCAAAAAT	10800
AATACCTTTA ATGGTATTGG ATTGCCAAGT CTCTATCTCA TGGACGAACA GGGAGACTGT	10860
AGCTTACTCA AAGCTTTTGG CTATCAAGAC TTTAAAGGGA GATTATCATG ATGGACAGTC	10920
CAAAAAAATT AGGCTATCAC ATGCCAGCAG AGTACGAACC CCATCATGGT ACCCTCATGA	10980
TATGGCCGAC TCGACCAGGA TCATGGCCTT TTCAAGGAAA GGCTGCTAAA AGAGCATTTA	11040

600

CTCAGATTAT	CGAGACCATA	GCAGAAGGGG	AAAGAGTCTA	TCTTTTGGTG	GAGCAGGCCT	11100
ATCTATCTGA	AGCCCAATCC	TATCTTGGAG	ACAAGGTTGT	TTATTTAGAC	ATTCCCACCA	11160
ATGATGCCTG	GGCGCGTGAT	ACTGGCCCAA	CCATTCTCGT	CAATGATAAA	GGTAAGAAAT	11220
TAGCCGTGGA	TTGGGCCTTC	AATGCTTGGG	GAGGCACCTA	TGATGGTCTT	TATCAAGATT	11280
ATGAAGAGGA	TGACCAAGTA	GCCAGTCGTT	TTGCTGAGGC	CTTGAAAGG	CCTGTCTATG	11340
ATGCTAAACC	TTTTGTACTG	GAAGGAGGCG	CAATCCATAG	CGATGGTCAA	GGAACATTC	11400
TCGTAAGTGA	AAGTTGCTTG	CTTAGTCCTG	GTCGCAATCC	TAACTTGACT	AAAGAGGAGA	11460
TTGAAACAC	ATTATTAGAA	AGTCTTGGTG	CTGAAAAAGT	TATTTGGCTT	CCTTATGGTA	11520
TTTATCAGGA	TGAAACCAAT	GAACACGTCG	ATAATGTTGC	TGCCCTTGTT	GGTCTGCTG	11580
AGCTTGTTTT	GGCTTGGACA	GATGACGAAA	ATGATCCCCA	GTATGCCATG	TCAAAAGCAG	11640
ATCTCGAACT	CTTAGAACAG	GAAACAGATG	CAAAAGGTTG	TCACTTCACC	ATTCATAAAT	11700
TGCCTATCCC	TGCAGTTCGA	CAAGTTGTGA	CAGAAGAAGA	TTTGCCAGGC	TACATCTATG	11760
AAGAAGGAGA	AGAAAAGCGA	TACGCAGGTG	AACGACTAGC	AGCTTCCTAC	GTAAACTTTT	11820
ATATCGCCAA	CAAGGCTGTC	TTGGTTCCAG	AGTTTGAGGA	TGTAAACGAC	CAAGTGGCCT	11880
TAGATATCCT	CAGCAAGTGT	TTCCCAGACC	GTAAAGTTGT	CGGAATACCA	GCCAGAGATA	11940
TTCTCTTAGG	TGGTGGCAAT	ATCCACTGTA	TCACCCAACA	AATTCCAGAA	TAGGAGAAAA	12000
AGATGAGAAA	TGTAAGAGTT	GCAACCATTC	AGATGCAATG	CGCTAAGGAT	GTGGCAACAA	12060
ATATCCAAAC	CGCAGAGCGT	TTAGTACGTC	AGGCTGCTGA	GCAAGGAGCC	CAAATTATTC	12120
TCTTGCCCGA	GTTGTTTGAA	CATCCCTATT	TCTGTGAGGA	ACGTCAGTAT	GACTACTACC	12180
AGTATGCCCA	ATCTGTAGCG	GAAAATACTG	CCATTCAGCA	TTTTAAGGTG	ATTGCTAAGG	12240
AACTACAAGT	TGTTTTACCA	ATCAGTTTCT	ATGAAAAAGA	TGGTAATGTC	TTGTATAACT	12300
CTATTGCCGT	CATTGATGCA	GATGGGGAAG	TGCTGGGCGT	TTATCGAAAG	ACCCATATAC	12360
CAGATGACCA	TTATTATCAA	GAAAAATTCT	ATTTACAGCC	TGGTAACACT	GGTTTCAAGG	12420
TCTGGAATAC	TCGCTATGCT	AAGATTGGTA	TCGGTATCTG	TTGGGATCAA	TGGTTCCCTG	12480
AAACAGCGCG	CTGTCTTGCA	TTGAATGGTG	CTGAATTGCT	CTTTTATCCT	ACAGCTATCG	12540
GTTCAGAGCC	AATTTTGGAT	ACAGATAGTT	GTGGTCACTG	GCAACGTACT	ATGCAAGGGC	12600
ACGCAGCAGC	GAATATTGTT	CCAGTCATCG	CAGCCAATCG	TTATGGTTTA	GAGGAGGTTA	12660
CTCCTAGTGA	GGAAATGGC	GGACAGAGCT	CCAGTCTTGA	CTTCTACGGT	TCCTCCTTTA	12720
TGACGGATGA	AACAGGAGCT	ATTCTAGAAC	GAGCTGAAAG	ACAAGAAGAA	GCTGTTCTGT	12780
TAGCTACTTA	TGACCTAGAC	AAGGGAGCAA	GTGAACGCCT	AAACTGGGGC	TTGTTTCGAG	12840

601

ATAGAAGACC AGAAATGTAT AGACAAATTA CAGATTAGTG TGGGAGAAAT GAGAGATTCA	12900
TTCTGCTAGA CTAACCTCTT ATTAGTAACT ATAAGATACT ATGGCATCTA GTAAATCGAT	12960
TTTTATGATT CGCTATTCTT GTCTATTGAT TAGTCCGTAT TTTAAAAATAT TAGCAAAAAA	13020
GCAAATAGCA GTAACCTCTG TCTATTGCT TTTCTTTTTT ATAGAATATA TTTCTCAATA	13080
GCACGCGCAA CGCCGTCTTC TTCGTTGCTT GAGGTAACGG CATCCGCAAG AGATTTGATA	13140
TAATCGCTGG CATTTCCCAT TGCAATCCCA AGCCCTGCAA ACTGGAGCAT TTCGATATCG	13200
TTATTAGCAT CGCCCATGGC CATAATCTCT GAGGAATCAA TCTTCAAAAT CTCAGCTAGT	13260
CGTGAAAGAG CAGTAGCCTT TGTCGTTCCA AGCGGCATTG CTTCATAAAT GACAGGCTGC	13320
GAACGAACTC CACTGAATCG TTGGCAAAGC TCTTCAGCAA AACGCTGCTC AAAATCGTCT	13380
GTTTGTCTT TTGTTCTTAA ACACATACCT TGGAAATCC GGAACCTTCC ACTAGTCGCT	13440
TCTTCAAGAG AAATTTCACT CAGGTCTGAA AATACTAGTT TAGCATCATT TTCAATAACT	13500
TGATTGGGCT TGTCACCGAG AACAAAATAA TGTGACTCGT CAAAAAGTGT CAACTGAACA	13560
TCACTCTTTT CAGCAAGGTC ATAGAGGTAT TCGATGTCAG CTGGACTCAG TTCTTTCCAG	13620
TCAACTAGAC TCCAATCACT GGTCTGGTGA GTTGAACAAC CGTTGTTAAC AATAATATAT	13680
TCGTTCTGGA GGTCAAGCTC CAGTTTTTTG TAGTAGGGA GGACACCGAA AAGGGGGCGA	13740
CCCGTACAGA GAACCACTT GACACCTTTT TCAATGGCTT TGTGAATAGC AGTAATGTGT	13800
GCTTGTGGGA TTTCTTGGC TTCATTGAGG AGGGTGCCGT CCATATCCAA GGCTAGTAGT	13860
TTAATCATAG GTCTTCCTCT TTATCTTTGC TATTATTATA GCATATTTTG GAGAAGAAAT	13920
TGATAGAAAG CTGAGACTA ATTGATTTTA TAGTTTAAGA TGTTTTGATG ACAATTCATG	13980
ATTTGAAGAG GATATTCGC AAAGATATGC TATACTATGT TTGTCAATGT TGCAACTAGA	14040
CAAATTAAAA AACCAACTTA ATATAATAGT TTTTTGTAA GTAGGTATGA GTAGCAGATT	14100
ACTCAACTAA TCTGAAGAAT AATGGAGGAA ATATATCATG ATTTTAATGA CAAAAATAT	14160
AAATCTAACA AATGAAGAAT TAGAGCTGAT ACAAGGTGGA GCAGATCCAT ATGGTAAAAA	14220
TCCTAATGGT AGGTACGATT GGGAAATAGA ACCAGTATTA ACTCTGCTGG TTCATGGATT	14280
TTGTCCCAGA GGCACCTATG ATTCAGGATA TATTGGAGGA GGTAAATCATC TTTGCAAAGG	14340
AAGTGCTGCG AGATTTTAAG TAAAAATTAT TAGGAATATG AAGAAACAAG GGGAGAAAAC	14400
AGAGGATTTA ATATGAAAAA ACGAGCTATT CAAATTTTAC TAGCATTGTC CTTAATTTTT	14460
TACAAATCAA CTTGGTTTTG GAGGCTTTTC AATTATCTCG CAAAGCCCTA TCTACCAGCA	14520
AGTCGTGAAT TTTTTCAGAT TCTGCTTTTG ATGGAGAGCG GAGTTCTTTT CTTAGCGGTC	14580

602

ATCTATCTAC TGGTTTTTCG AGGAAAGAAA ATTTTTCATT TCAAGTGGCA GCTGAGGTAC	14640
TTCATCTACC TTTTACTGGG CTACATCATT TCATATATGT CTGACTTCCT CTTTTCGTAT	14700
TTCATATCCC TGTCTTCAA TCAGATTCTT TTGAATGAAA CGGTAGAAAT GATGGGGAGA	14760
CAGGAGTTCC CTTATGTCTT GCTCATCGTT TGCTTCATCG CCCCTATTGC TGAGGAATTG	14820
ATTTATCGAG GtGTGCTTAT GACAACCTGT TGCAAAAAC CACCTTGGTA CG	14872

(2) INFORMATION FOR SEQ ID NO: 73:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10223 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

CGTGCTATCG GTCTCAAAAC CAATCTGGTC GCTATGGTCA AATCCAGTTG GAAAATCCAT	60
TCTTCTTGGA GCCATCTGCT GGATTGCCAT CATCCTCACC ACTCTTGGTA TGCAGACCCT	120
TATCGGCATT TTCTAATACT CTTGCAAAAT CTCTTCAAAC CACGTCAACG TCGCCTTGCC	180
GTAGGTATAT GTTACTGACT TCGTCAGTTC TATCTGCAAC CTCAAAACGG TGTTTGAGCT	240
GACTTCGTCA GTTCTATCTG CAACCTCAA ACGGTGT TTT GAGCTGACTT CGTCAGTCGT	300
ATCTACAACC TCAAAACAGT GTTTTGAGCT GACTTCGTCA GTTCTATCTG CAACCTCAA	360
ACAGTGT TTT GAGCAGCCCG TGGCTAGTTT CCTAGTTTGC TCTTTGATTT TCATTGAGTA	420
TAACACAAAA GGTAGCCCAT CAGCTACCTT TTTCTTATGC TTCCTCAATC AAGCGAGTAT	480
GTTCTCTCTT GATACAGCGA TTCATCACGA TATCATCACA TCCACCATCA CGCAAAATCT	540
CTTTCGCTTC TAAACTTTCA AGTCCTAGCT GTGCCAAAA AATCTTGGCA TCAGCTTTGA	600
GAAAATCACG CGCCACATCG GGCAGAAATT CACTGCGACG ATAAACATTG ACAATATCTA	660
CAGGAAAAGG AATTTCAGCG AGGCTAGCAT AAGCCTTTTC ACCCAAGATT TCGCCACCTG	720
CCGCCTTGGG ATTGACTGGG ATGATTTTAT AGCCCCGAGC CTGCATTTCC TTTGTTACTC	780
GATTGCTGGT TGTTCCTTCA CGGTCAGACA AACCACAC AGCAAGGGTT TTA CTGTTG	840
CGAGATACTG ACGAATCACG CCATCACTTG GATTGATAAA TTCTTGACTC ATAGAAATCC	900
TCCTTTTTC TCA GTATAGC ACATTTTGAA AAGGTTTGCA GAATTATACT ACAAAAAAGG	960
AGGACTAGCC CCTTTTAT TTAGCCTCGT ACCAGGTTGC CCCTTCATTC TCATCTGCGA	1020
TAAGAGGAAC ACTGAGTTGA ATGGCTTCTT CCATGGTTTG TTTCACCAAT TTTTCATCT	1080
CTACCAATTC AGATTTAGGC ACTTCAAGGA CGATTTTCATC GTGCACTTGT AACAGCATCT	1140

603

TAGTCTGATA ACCACCTGCA ACCAAGGCTT TATCCAGCTG AATCATGGCA ATCTTGAGAA	1200
TATCTGCTGC CGAACCCTGG ATAGGTGAGT TGATAGCAGT TCGCTCCGCA AAACCACGAA	1260
TATTGAAGTT GCGCGAATTG ATATCTGGCA ACTCACGGCG ACGCTTAAAG AGGGTCTCTA	1320
CATAGCCCTT ATCACGCGCC TCCCGCACCA CTTTCATCCAT GTAGTTTTTA ATACCTGGAA	1380
AACGTTCAAA GTAGGTATCA ATGTAGGCTT TGGCTTCCTT ACGACTAATT CCCAAATTAT	1440
TAGACAAGCC AAAGTCTGAA ATCCCATAAA CCACTCCAAA GTTAACTGCC TTGGCATTGC	1500
GACGGTCGTT TGCAGTCACA TCATCAGGAC GCTCAATGCC AAAGACCCGC ATGGCTGTCTG	1560
AAGTATGGAT ATCTGCCCCC TCTTGGAAGG CCTTAATCAA GTGCTCATCC TTAGAAATAT	1620
GCGCCAAAAC GCGCAATTCA ATCTGTGAAT AGTCAGAGCT GAGTAGCACA CTATCCTCCC	1680
ACTCTGGCAC AAAAGCCTTC CGAATCAAGC GCCCCTGTTC CAATCGGGCA GGAATATTTT	1740
GCAAGTTTGG ATCCACACTA GACAAACGCC CGGTCTGGGT CAAATCCTGC ACATAGCGAG	1800
TATGAATCTT TCCATCAGCC AAAATCCAGT CCTGCAAGCC AATTACATAA GTAGATTGAA	1860
TCTTAGCAAT TTGACGGTAA TCCAGGATTT TCTTAACAAT CGGAGCAATA GGAGCGAGAC	1920
GCTCTAAAAC ATCCACTGCT GTCGAATAAC CTGTCTTGGT TTTCTTAGTG TATTCTAGAG	1980
GAAGTCCCAA TTTCTCAAAG AGAAGCACGC CCAACTGCTT AGGCGAGTTG ACATTAAACT	2040
CCTCACCAGC CAGCTCGTAA ATCTCTTGAG TCAGTTTTTC AATGACAAGC TCATTTTCAG	2100
CCTGCATCTC AAGCAAGGTC TCTTTCTTGA CCATAATCCC AGCAATTTCC ATCTTGGCAA	2160
GGACAAAAGC CAGAGGTGTC TCCATATCAT AAAGAAGCTC TAATTGCCCA TTTTCGCTGA	2220
GTTTTTCAAG TAAAATAGGC TCTGTTTCTA CAAAACAGC AAGTTTACAA GCTAAGTGTT	2280
CCAAGAATTT CTCACGTTCA GGAATGGCCT TTTTAACACC CTTACCGTAG AAAGTTTCAT	2340
CATCAACCAA GTAAGTCTGA CCATAAAGAC TAGCGATGGT CGCAATTTCA TTGTCCTCCA	2400
CAGTCGAAAG GAGGTATTTA GCCAAACGGA TGTCAAAAGC AGGCGCCTGC AAATCCACAC	2460
CAAAACGTTG CAAAAGAACT TTAACCTTCT TAAAGTCATA AACTCTCAGA GATGTTTTTT	2520
CTAAGAAATC CTTGAAAATC GGTCTTGCA ACAGCTCAAG CTTGTCTGTG GCATAGAGCT	2580
TATCCCCACA AGACCAGACA AATCCAACCA AATTATCCGT ATGGTAATTC TCACCAAAAA	2640
GCTCAAAGTG GAAGATAGAC TCTTCACTCA GCATATCTTG ACTGATTTGG TCAACAATAG	2700
TAAAATCCAA ACTCTCAGAC ACATCAGCTG ACGACACATT TAAAGCCTGC TTTAGCTGTT	2760
TGAAGCCCAT CTCATCGTAG AATTTCCCAA GATTTTCAAC ATCTGGACCA CTATAGACCA	2820
AGTCCTCTAA ACCAATCGCA ATCGGTGCCT TGGTATCAAT GGTGCTAGT GTTTTAGACA	2880

604

AAAAGGCCTG TTCCTTGTC	TTGATGAGAT TTTCTTCAT	CTTAGAAGTC TTCATTCCAT	2940
CAATATTTTC ATAAATCCCC	TCAAGCGAAC CATGCTCCAG	CAAGAGCTTA ATACCCGTCT	3000
TTTCACCGAC TTTGGTCACC	CCAGGGATAT TATCCGACTT	ATCACCCATG AGCGCCTTGA	3060
GATCGATAAA CTGAGCTGGT	GTGAGGCCCA TTTCTTCCAT	GAGGTAATCT GCGGTAAAGG	3120
CCTCAAACCT AGCCACACCT	TTCTTGGAAT TTTCAACCAC	CGTATGCTCA TCCGTCAGCT	3180
GAATCAAATC CTTGTCCCA	CTGACAATAG TAATATCAA	ACCATCCTGC TCTGCTAGCT	3240
TATCCAGCGT CCCAATGATG	TCATCCGCCT CATACTGAGC	CAGATCATAG TGACGAATCC	3300
CCATATGATC CAGCAACTCA	CGAATGAAAG GAAATTGCTC	ACGAAACTCA TCAGGAGTCT	3360
TGGCCCGACC ACCCTTATAG	TCCGCATACA TCTCTGTCCG	GAAGGTCGTC TTTCCCGCAT	3420
CAAAAGCCAC CAAATATGA	CTCGGCTCAA CCCGCTCCAA	TAAATGACTC AACATCAACT	3480
GAAAACCATA AATCGCATTG	GTATGCAAAC CAGCCACATT	CTTAAACCG TCCAACCTGCT	3540
GATACAGCGC AAAAAACGCC	CGAAAGCTA CAGAAGACCC	ATCAATCAAT AATAATTTT	3600
TCTTATCCAT ACACCCATTA	TAAAGGAAAG AATCAAAAA	TACCATTGGG AAGAGCTAGA	3660
GCAAGTATTT TTCAACTTT	TTCCGAATAA ATAGATAGAG	CCAGAGAATT TAGTAAACCT	3720
AGATTTAAAA ATGTGCTATA	ATATAGTATA TTGAATCTAT	AATAGTACAC CTTGACTGCT	3780
AAAATATTTT TATAAATTAA	TTTGACTTTC CTGATAGAGT	TATTCACATC TTATTTCAAC	3840
TCACTATAGA AGGAGGAATA	GGAGGATTCT CAGACATCCG	GGCATCAGCC CAACTAATGA	3900
TTTGATTGCT AAGAAAATAT	TCAGCAATCC AGAAATCACT	TGTCAATTTA TTCGCGATAT	3960
GCTGGACTTG CCAGCAAAAA	ATGTGACCAT TTTGGAGGGA	AGCGATATTC ACGTATTACT	4020
CTCCATGCCT TACTCGGTGC	AGGATTTTTA TACCAGTATA	GACGTCTTGG CGGAGTTGGA	4080
TAACGGTACT CAAGTAATTA	TTGAGATTCA AGTCCATCAT	CAGAATTTT TCATCAATCA	4140
CTTGTTGGCT TACCTGTGCA	GTCAGGTTAA TCAAAATCTT	GAAAAAATTC GTCAGCGAGA	4200
AGGTGATACT CACTAGAGCT	ACAAACACAT CGCTCCTGTT	TACGCCATTG CTATCGTGGA	4260
TAGTAATTAT TTCTCAGATG	ACCTGGCTTT TCATAGCTTT	AGTATGCGCG AAGACACAAC	4320
AGGTGAGGTA TTGGCGATTA	CCAACAATGG ACAGGAAAAC	CATCTGGTTA AGATGGCATT	4380
CTTGGAATTA AAAAATACAG	AGAAACCAGC AAAGACAAGG	TTGCAAGCC ATGGTTGGAG	4440
TTTTTCGGCA ACAAGCCCTT	TACCCAGCAA CCGCAACGAG	CCATTACCCA AGCAAATCAA	4500
CTGCTGGACT ACAAGAGCTG	GTCCGAGGAG GACAGGAAAA	TGTTTAGTCA ACTACATATG	4560
CGAGAAGAAC AAGTCTTGT	AGCACAGGAC TATGCCTTGG	AAACTGCTAG GGCTGAAGGC	4620
CTTGAACAAG GACTAGAGCG	TGGGAAAGTT GAAGGAAGGG	CAGAAAGGAA ACTTTTTGCC	4680

605

TTCCTAGACA TAGTACGCCA AGGTCCTCTG ACTTCTGAGG TTGCCAGCCA GCAATTAGGT	4740
ATGTCACTAT CTGAATTGGA GGCACCTGTG TAAAATGGCT CCATAATATC CATAGTGGGT	4800
AAATCCCCTA TGGATATTAT GGAGCCTATT TTGTGTAGAA AAAAAGTCCC ATATGACCTA	4860
TAATGAAAAG CGACAAAACA ACTCATTAGA AAGAATCATA TGGAACAATT ACATTTTATC	4920
ACAAAATTAC TAGACATTAA AGACCCTAAT GTCCAGATTT TAAACATCAT CAATAAGGAT	4980
ACACACAAGG AAATCATCGC CAAACTGGAC TACGACGCCC CATCTTGCCC TGAGTGCAGA	5040
AACCAATTGA AGAAATATGA CTTTCAAAAA CCTTCTAAAA TTCCTTATCT TGAAACGACT	5100
GGTATGCCTA CAAGAATTCT CTTAGAAAAG CGTCGATTCA AGTGCTATCA CTGTTCAAAA	5160
ATGATGGTCG CTGAACTTC TGATGACGTA CAGTCATATT TCTTCTCTTT TTATTATATC	5220
ACAGTTTAA ATCTAGCTTT ACTAGATTCA CCGCTACTAT CTATTTATTC GGAAAAAGA	5280
CGAAAAACC TGAGAATCAT CTCAGGCTTG GTCATTAAAT TTTTCTCTCA ATATCGAAAA	5340
GTGGAGAAAG TGGTCGTTTT TCATGAATAC GTACGATAGC ATCCCTAGG AGATGAGCGA	5400
TTGAAATCTG CTCAATCTTA TCAATCAAAC GCTCTTCTGG CAGATAGATG GTATCCAAAA	5460
CAACCAATTT CTTAATAGCT GATTTTGGGA TATTGTCCGT AGCAGGACCA GAAAGAACTG	5520
GGTGCGTACA GCTTGCATAG ACTTCAACAG CACCAGCTTC CGCAAGAGCA TCTGCCGCAT	5580
GACAAATCGT TCCAGCGGTA TCAATCATAT CATCAATCAA GATACAAGTC TTGCCTTCAA	5640
CCTTACCGAT GATATTCATA ACTTCACTAG TATTCATCTT ATCAACGCTA CGACGTTTAT	5700
CAATAATAGC GATAGATGTT TTCAAAAATT CTGCCAATT ACGAGCACGA GTCACCCCTC	5760
CATGGTCCGG GCTGACAACC ACATAGTCAG AACCAACCAT ACCACGACGC TCAAAATAAT	5820
CTGCAATCAG AGGAGCACCC ATCAAATGAT CCACAGGAAT ATCAAAGAAT CCTTGAATTT	5880
GCGCAGCATG CAAGTCGATG GTCAATAAAC GATCCACTCC AGCTACTTCA AGCATATTTG	5940
CGACAAGTTT TGAAGTGATT GGCTCACGCG CTCTCGCCTT TCTATCCTGA CGTGCATACC	6000
CATAGTAAGG CATGACAACA TTGACAGATT CTGCACTCGC ACGCTTCAA GCATCTACCA	6060
TAATCAAAAT TTCAAGCAGA TTGTCATTTA CAGGCGAACT AGTTGATTGT AAGATAAAGA	6120
CGTGTTTCCC ACGGATTGAT TCTTCAATGT TGACCTGAAT CTCTCCATCT GAAAATTGGC	6180
GAACACTTGA TTTCCCAAC TCTATCCCAA TCTCTGCGC CACACGTTCT GCCAATTCTT	6240
TATTAGAAGA AAGGGCAAAC AGCTTTAAAT CAGAAAAAGA CATGATTTCC TCCGGTATAT	6300
ATGTATAACT TGTGCTTTT ACAAGATTTT CCATCTACCA TTGTAGCGCT TTTTGCCTA	6360
TTTTTCAATC AAAAATAAAA GAAGGGCACC ATATTTGTAC CCTTGCATCA TTCTTTTGAA	6420

606
AAATATTCTA GGTCATCAAC TCATTGTGTT TCTCAACAAA GCAATAAGCA TGATAAAAAC 6480
CATAGAGAGC AATAGCCGTA ACCACTGGAA TCGCTAAAGG CAACTCTGTT TCCAACTCCA 6540
CAAAAGGAGA GTTAAACAAG AAGTGAGTTC CCAAGGCTAA ACCTAGAAAA ATAAGGCCCT 6600
GTTTCTTGCC AACCTTCTGT CCTTTATAGG CTCTGTAAAG CAAGTAAACA CCTACTACAG 6660
CTAGACCTGA AAAAGTCCAG TGAGAGGCAA TTCCTGAGAT GATACGCTCT AAAATTCGCG 6720
AAATAGTAAA GTCAAAGCCC TCTGGCAAAT CCGTACGAAT ATAACCAATA TCCTTAATCA 6780
TTTGGAATCC CAAACCGGAA GCAATTCCAA GTAAAAACAA AGATTTTAAT TTTGCGACAG 6840
GAATCAAAGC CAAAACAAAA ACAAGTGACA ATAATTTCAA GGGTTCTTCT ACCAAAGGAG 6900
CCGCAATAGC ACTTTCAAAG GCATTTAAAA ATGGACTATC TGGGAAAAGA ACCCCCAGTA 6960
AATCATGGAT ATAAGTATTA GCAAACTAG ACAACCAGCC TGAAAGGAAC ATCCCTCCCA 7020
ATAAAGACAG AATCAAAACC TTCTTTGGCA ATTCCCATTT TTCCAATAC GGAAGAGAAA 7080
ATAAAGAGCC GGAATCATGT AAAAGAGAGC TAGAAAGATA GAAACTCCCA TTAGTCCATA 7140
TTCCGCACCT GACCTCGAAC CGTCCGTATA GTAGATGGTT TCATACTGTA AACCAATACA 7200
TAGCAATAAA ATAAAAATAA ATAAATATT GCTTTTCTTC ATACACTTTC TTTCTAAATG 7260
AAGTATTTAT AATTCTACGA CTGTCATACT TCCTGTATCA ACATTGTAAA TGGCACCAGA 7320
GATAATGACA TCGTCTGGTA TTAGGGGAGA CTCGATAAGC AGTTGCATAT CCTCGCGTAC 7380
ACTCTCTTCT ATATCTTGGA AGGGCAAGAA GTCCTGGTCT GACACATCGA CACCCAATTC 7440
TTCCTTCAAA TACTCCTGAA AAGGTCATT TTCAAAGGTC TGAGCACCAC AGTCTGTATG 7500
ATGCAATACC ACAATTTCTC TTGTCCCAT TTGTTGCTGG GAAATAACTA GAGAACGAAT 7560
CATATCCTCA GTCACGAC CACCTGCATT CCGCAAAATA TGAGCATCCC CAAGTGCCAA 7620
ACCTAGAGCT TGCGCAACGT GCAAACGTGA GTCCATACAG GTCACAATGG CTACTCTGGT 7680
TTTAGGTTTA AGTGGCAGAT TTAAGTGGCC ATGTAGGGCA ACATAAGCCT GATTGGCTTG 7740
CATAAACTGT TCAAAATACG ACACGATTCC CTCCTTGAAA ATTTGATAGT CAAATATTTT 7800
TCCTATCTTA TCATTTTAA GAGAATTTGT CACGGATTAT GCAAAGACCT TTTTCAAGAC 7860
TTCTGAATC GTTGTCACGC CAATGACCTG AATTTCCTTA GGCAGAGTGA TTCCTGTCAA 7920
GGAATTCTTA GGTACATAAA TCTTAGTAAA GCCCAGTTTA GCAGCTTCGT TGATGCGTTG 7980
CTCAATACGA TTCACGCGCC GAATCTCTCC TGTCAAGCCC AGTTCTCCGA CAAAACATTC 8040
CTGAGGATTA GTTGGCTTGT CTTTGTAGCT CGAAGCAATA GCAACTGCAA CAGCCAAGTC 8100
AATCGCAGGT TCATCCAATT TAACACCACC AGCAGATTTG AGATAGGCAT CCTGATTTTG 8160
CAAGAGAAGC CTGCCCCTT TTTCCAAAAC AGCCATAATC AAGCTAGCAC GGTTAAAATC 8220

607

AAGTCCTGTC GTAGTACGCT TGGCATTTCC AAACATGGTC GGTGTTACCA AAGCCTGAAC	8280
CTCCGCCAAA ATCGGACGCG TCCCTTCCAT GGTTACAACG ATGGAGGAAC CAGTCGCCCC	8340
ATCCAAACGC TCTTCTAGGA AAACCTGACT CGGATTGAGT ACCTCAACCA AGCCGCCCGA	8400
CTGCATCTCA AAAATCCCAA TCTCATTAGT GGAACCAAAA CGATTTTGA CCGCTCTCAA	8460
AATACGAAAG GTGTGGTGAC GCTCCCCTTC AAAGTAAAGC ACCGTATCCA CCATATGCTC	8520
CAACATACGA GGCCAGCCA AGGTTCTTC TTTGGTCACA TGACCTACGA TAAAGATGGC	8580
AATGTTATTG GTCTTGCCA ACTGCATGAG TTCAGCGGTC ACTTCACGCA CCTGAGAAAC	8640
AGACCCCTGC ACCCTGAAA TCTCAGGAGA CATGATGGTC TGGATGGAAT CAATAATGAG	8700
AAAGTCTGGC TGGATACGCT CCACTTCTGC ACGAACACTC TGCATATTGG TCTCTGCATA	8760
GAGATAAAAC TCACTATCAA TATCACCTAA GCGCTCTGCA CGTAGTTTAA TCTGCTGGGC	8820
AGACTCTCC CCACTGACAT AGAGAACTGT CCCCCTTGG GACAACTGGG TTGAGACTTG	8880
TAGGAGAAGA GTTGATTTC CAATCCCAGG ATCCCCACCG ATAAGGACGA GACTTCCTGG	8940
TACCACTCCG CCTCCAAGCA CACGGTTGAA TTCCTCCATC TCCGTCTTGG TTCGATTGAC	9000
ATTGATGGAA GTCACCTCAG CTAGTTTCAT GGGCTTGGTT TTCTCACCTG TCAAGGACAC	9060
ACGCGCATTC TTAACCTCGG CAACCTCAAC CTCTTCCACA AAAGAAGACC AAGACCCACA	9120
GTGCGGCA CGTCCCAGAT ATTTAGGGA ATTATACCA CAATTTTGAC ATACAAATGT	9180
CGCTTTTTC TTTGCGATGA CAAACCTCTT TCTATATCTC TAACTCACAC TCAATCACTT	9240
GGCAAAATC AATCTTCTCA TTTGGCACA ACTGGCGCAT GAGCATTCGA TGAGCAACAA	9300
CTACCACAGT CTGATGTTCT CGATACTTAG ACATACATTC TAGAAACCGA GACTTCATTT	9360
CCGTAGCTGT CTCATATTGA ATAGGACTAT TAGGAAGCAA CTCCCCTTG TTTTCTAAAA	9420
ACAGTCTTCT AGCTGTTTCA AAGTTTCTA TTCCTGTTT ATAGACCTGC CATTCATGTA	9480
ATAAAGGCTC TACTCTTAAA GGAAGACCCG TAGCACAGAC CACATACGAA GCCGTTTCTA	9540
AAGCTCTTGT GACTGCAGAA GATACGATTA TTTCAGCTGA CGAGAGTAAA GGATTTTGC	9600
TCAATTTCTG GACTTGCTGC CGTCCCATCT CAGACAAGGG TGCCAAATCT ATCCCAAATC	9660
CTATATAAGA ACGCTCCTCT AACTCACGGT AATCTGGCTC CCCATGACGT ACAAAGATAA	9720
TCTTCATTCT AGTGCCCTGT CGATCCAAAT CCACCAGTTC GAACGCCATC AGCTGCATCT	9780
CCATCTGCAA TTAAGAAAGT AGCAAAAACA GCCTGGACAA TACGCTCCCC AACTTCAAGA	9840
ACAACCTCTT GGTCTGTGAT ATTCTTCATC TGCGCAAAAA TATGCCCTTC ATTTCCAGGA	9900
TTCCATAAT AATCCCATC AATGACTCCA ACTGAGTTAA TTAAACCAA GCCCTTCTTA	9960

608

CGAGGATTTG AAGAACGATC ATAGAGGTAG AGAACCTCAG TCGGCTGCAT ATAAGCCTTA	10020
ACCCCTGTCTG GAACCAAGAC AATCTCTCCT GCGCAACAA CTGTACGCAC AGCAACCTTT	10080
AAGTCGTAAC CAGTCGCATG CGCTGTCTCA CGCTTGGGCA ATAAATTTTC ATCTGTAAAA	10140
CTCGAAACCA ATTCAAAACC ACGAATTTTC ATAATTTTCT CTTTCTATT ATCATTATT	10200
CTAGATTATT CTATACTTAT TTA	10223

(2) INFORMATION FOR SEQ ID NO: 74:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 16535 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

TGGTCTGTC CTTATCGGCG CCTTGTCTTG CTGCCATGG CTACACCAAC TATCTCATCC	60
GACGAAAGTA CACCAACCAC TAACGAACCC AACAACAGAA ATACAACCAC CCTTGCCCAA	120
CCTCTTACTG ATACAGCAGC TGGCTCTGGT AAGAACGAAA GTGATATTTT TACACCTGGA	180
AATGCAAACG CTTCCCTAGA GAAACAGAA GAAAAACCTG CTGCAAGCCC AGCCGATCCA	240
GCACCACAAA CTGGACAAGA TCGTTCAAGT GAGCCAACTA CTTCTACTAG TCCAGTAACA	300
ACTGAAACTA AGGCAGAAGA GCCCATCGAA GATAACTACT TCCGTATCCA TGTCAAAAAA	360
CTTCTGAAG AAAACAAGGA TGCTCAAGGA CTATGGACTT GGGACGATGT TGA AAAACCA	420
TCTGAAACT GGCCAAACGG AGCTTTGTCC TTCAAGGATG CCAAGAAAGA TGA CTACGGC	480
TATTACCTAG ATGTCAAATT AAAGGGAGAA CAAGCCAAGA AAATTAGCTT CCTCATCAAC	540
AATACAGCTG GAAAAATCT AACCGCGAT AAATCTGTAG AAAAAGTAGT TCCAAAAATG	600
AACGAAGCTT GGTTAGACCA AGATTACAAG GTTTTCTCTT ACGAGCCACA GCCTGCAGGA	660
ACTGTTTCGG TCAACTACTA CCGCACAGAT GGCAACTATG ACAAGAAATC TCTCTGGTAC	720
TGGGGAGATG TGAAAAATCC AAGTAGCGCT CAATGGCCTG ACGGAACAGA CTTTACGGCT	780
ACAGGCAAAT ATGGCCGCTA TATCGACATT CCTCTTAATG AAGCCGCAAG AGAATTTGGA	840
TTTTTATTAC TAGATGAGAG CAAACAAGGA GACGACGTGA AAATCCGTAA AGAAAAATTAT	900
AAGTTCACAG ATTTGAAAAA TCATAGCCAA ATTTTCCTAA AAGACGATGA TGAATCGATT	960
TACACAAATC CATACTATGT CCATGATATC CGTATGACAG GAGCCCAACA CGTAGGCACT	1020
TCTAGCATTG AAAGTAGCTT TTCAACACTT GTCGGTGCTA AAAAGAAGA TATCCTCAAA	1080
CACTCCAACA TCACTAATCA CCTAGGAAAC AAGGTAAC TAACCGATGT TGCAATCGAT	1140

609

GAAGCTGGTA AGAAAGTGAC CTACAGCGGA GATTTCTCTG ACACAAAACA TCCTTATACT	1200
GTTAGCTACA ATTCGGACCA ATTCAGTACC AAAACAAGCT GGCGCCTGAA AGATGAGACA	1260
TACAGCTATG ATGGCAAACCT GGGAGCTGAC CTAAGAAG AAGGAAAACA AGTTGATTTG	1320
ACCCTTTGGT CACCAAGTGC TGATAAGGTT TCTGTTGTTG TCTACGACAA GAATGACCCT	1380
GACAAAGTAG TTGGAAGTGT CGCTCTTGAA AAAGGGGAAA GAGGAACTTG GAAACAACT	1440
CTAGACAGCA CAAACAACT CGGAATCACA GATTTCACTG GCTACTATTA TCAATACCAA	1500
ATCGAGCGTC AAGGTAAAC TGTTCTTGCA CTCGATCCTT ACGCTAAATC TCTTGCTGCT	1560
TGGAATAGCG ACGATTCCAA GATTGACGAT GCCCATAAAG TGGCTAAAGC CGCCTTTGTA	1620
GATCCAGCTA AACTCGGACC TCAAGACTTG ACTTATGGTA AGATTACAAA TTTCAAGACT	1680
CGTGAAGACG CCGTTATCTA CGAAGCTCAT GTGCGTGATT TCACTTCAGA TCCTGCCATT	1740
GCAAAGACT TGACCAAACC ATTTGGGACT TTTGAAGCCT TCATTGAAAA ACTAGACTAT	1800
CTCAAAGACT TGGGTGTAAC CCATATCCAG CTCCTTCCAG TCTTGTCTTA CTACTTTGTC	1860
AATGAATGA AAAACCATGA ACGCTTGTCT GACTACGCTT CAAGCAACAG CAACTACAAC	1920
TGGGGATATG ACCCTCAAAA CTACTTCTCC TTGACTGGTA TGTACTCAAG CGATCCTAAG	1980
AATCCAGAAA AACGAATCGC AGAATTTAAA AACCTCATCA ACGAAATCCA CAAACGTGGT	2040
ATGGGAGCTA TCCTAGATGT CGTTTATAAC CACACAGCCA AAGTCGATCT CTTTGAAGAT	2100
TTGGAACCAA ACTACTACCA CTTTATGGAT GCCGATGGCA CACCTCGAAC TAGCTTTGGT	2160
GGTGGACGCT TGGGGACAAC CCACCATATG ACCAAACGGC TCCTAATTGA CTCTATCAAA	2220
TACCTAGTTG ATACCTACAA AGTGGATGGC TTCCGTTTCG ATATGATGGG AGACCATGAC	2280
GCCGCTTCTA TCGAAGAAGC TTACAAGGCT GCACGCGCCC TCAATCCAAA CCTCATCATG	2340
CTTGGTGAAG GTTGGAGAAC CTATGCCGGT GATGAAAACA TGCCTACTAA AGCTGCTGAC	2400
CAAGATTGGA TGAAACATAC CGATACTGTC GCTGTCTTTT CAGATGACAT CCGTAACAAC	2460
CTCAAATCTG GTTATCCAAA CGAAGGTCAA CCTGCCTTTA TCACAGGTGG CAAGCGTGAT	2520
GTCAACACCA TCTTTAAAAA TCTCATTGCT CAACCAACTA ACTTTGAAGC TGACAGCCCT	2580
GGAGATGTCA TCCAATACAT CGCAGCCCAT GATAACTTGA CCCTCTTTGA CATCATTGCC	2640
CAGTCTATCA AAAAAGACCC AAGCAAGGCT GAGAACTATG CTGAAATCCA CCGTCGTTTA	2700
CGACTTGAA ATCTCATGGT CTTGACAGCT CAAGGAACTC CATTTATCCA CTCCGGTCAG	2760
GAATATGGAC GACTAAACA ATTCGGTGAC CCAGCCTACA AGACTCCAGT AGCAGAGGAT	2820
AAGGTTCCAA ACAAATCTCA CTTGTTGCGT GATAAGGACG GCAACCCATT TGACTATCCT	2880

610

TACTTCATCC ATGACTCTTA CGATTCTAGT GATGCAGTCA ACAAGTTTGA CTGGACTAAG	2940
GCTACAGATG GTAAAGCTTA TCCTGAAAAT GTCAAGAGCC GTGACTATAT GAAAGGTTTG	3000
ATTGCCCTTC GTCAATCTAC AGATGCCTTC CGACTTAAGA GTCTTCAAGA TATCAAAGAC	3060
CGTGTCACC TCATCACTGT CCCAGGCCAA AATGGTGTGG AAAAAGAGGA TGTAGTGATT	3120
GGCTACCAAA TCACTGCTCC AAACGGCGAT ATCTACGCAG TCTTTGTCAA TGCGGATGAA	3180
AAAGCTCGCG AATTTAATTT GGGAAGTCC TTTGCACATC TAAGAAATGC GGAAGTTTG	3240
GCAGATGAAA ACCAAGCAGG ACCAGTCGGA ATTGCCAACC CGAAAGGACT TGAATGGAAT	3300
GAAAAAGGCT TGAAATTGAA TGCCCTTACA GCTACTGTTC TTCGAGTCTC TCAAAATGGA	3360
ACTAGCCATG AGTCAACTGC AGAAGAGAAA CCAGACTCAA CCCCTTCCAA GCCTGAACAT	3420
CAAAATGAAG CTTCTACCC TGCACATCAA GACCCAGCTC CAGAAGCTAG ACCTGATTCT	3480
ACTAAACCAG ATGCCAAAGT AGCTGATGCG GAAAATAAAC CTAGCCAAGC TACAGCTGAT	3540
TCACAAGCTG AACAACCAGC ACAAGAAGCA CAAGCATCAT CTGTAAAAGA AGCGGTTTCA	3600
AACGAATCGG TAGAAAATC TAGCAAGGAA AATATACCTG CAACCCAGCA TAAACAAGCT	3660
GAATTCCAA ATACAGGAAT CAAAAACGAA AACAACTCC TATTTGCAGG AATCAGCCTC	3720
CTTGCGCTCC TTGGTCTCGG TTTCTTACTA AAAAATAAAA AAGAGAACTA AACTAGCCCT	3780
CCTATAGAAA AATCCCCAA GCATTATAGC TCGGGGGATT AATTTTGTGTA CAATATTTGT	3840
TGTCCTAATA AACTTGATTA GGATTTTTTA TTAAGCCTCT TTCATAGCAA AATAAGCTCG	3900
TACTTTGGGT GCAACTTGTG TTCCGAAGAG TTCAATAGCT CTCAGAACCT GGTCAAGAG	3960
CATAGAACCA AGCGGTAGAT GAAGCATGAA GCGGTCCAAT CCTAAATCCT CTATCATGCG	4020
AATCAATTTT TCGGCCACCT GATCTGGATT GCCAACAAAC ATGGCGCCAT TTGGCCCTAC	4080
CTGCTCCAAA TATTGCTCAT AACGCAATTC CTGCCAGTGC GGACGGTCTT TGGAAATAGC	4140
ATCCACCACT TGCTTAGTCG GATGGAATA ATCTTTCACC GCCTGCTCAC CATCTTCCGC	4200
AATCCACCCC CAAGAATGGG CTCCCACTTT CAAGTCTTTG TCAGCATGGC CCCTTCGCTT	4260
CCAATCTCAC GATAAGCCTG AATCAACTTT TTAATAAATAC GTGGATTACC ACCAATAATA	4320
GCATATACAA TCGGTAGACC AGCCTGAGCA ATCTTCACTG TTGATTGAC ATGACCACCT	4380
GTAGCTATCC ACAAGGGCAA TTTGTCTGA ACTGGACGAG GATAAACTTC TTTACCAGCA	4440
ATCGTTTGAG TCAATCGACC TGCCAGTCT AACTTGGTCT TTTCAATTGAC TAACTGAAGC	4500
AAGTCTAATT TCTCATCAA AAGAGAGTCG TAGTCTTTCA AGTCATAACC AAACAGAGGG	4560
AAAGATTCCG TGAAAGAGCC CCTTCCAGCC ATAATCTCCG ATCGTCCATT TGACAAAGCA	4620
TCGATAGTGG CATACTGTTG GAACAAACGA ATCGGGTCCA TGCTTGACAG AATGCTGACT	4680

611

GCACTGGTCA AACGGATTTT CTTGGTATTG ACTGCCCCAG CGGCCAGAAC AATCTCTGGG	4740
GCTGATACTG CAAAATCCGC CCGATGGTGC TCACCAATCC CATATACATC CAAACCAACC	4800
TTGTCAGCCA GCTCAATCTC TGCCACCAAC TGGCGAATGC GTTCAGCATG ACTGTAAGTT	4860
TGTCCAGTCC CTTCAAGCTC CGTTATTTCC CCAAATGTTG AAATTCCCAA TTCTACCATT	4920
GTGATTCTCC TTATCTATCT CTGTACTTCA ATTTGAAAAA TTATTCTAAC ACGAATCTTG	4980
AGTACAAGCA ACCGATTTGC TCATTAGAAA AAGCCTAGAT AACTAGACTT TTTTAGCTTA	5040
TTCTACCGTT ACTGACTTGG CAAGGTTACG TGGTTGTCC ACATCGAGGC CACGGTGGAG	5100
GGTTGCAAAG TAAGCGACTA ATTGCGTTGG TACGACCATT GAAATTGGTG AGAGGTATGG	5160
ATGTACGGTC GTAAGGACGA TATCGTCGGT ATCTTTGGCT ACATTCTCTT CTGCGATAGT	5220
GAGGACTTTG GCACCACGGG CTGCGACCTC TTGGATATTT CCACGAGTAT GATTGGCAAG	5280
AACGGATCT GACAAGAGAG CAAAACAGG CGTTCCTTCT TCAATCAAGG CAATGGTTCC	5340
GTGCTTGAGT TCTCCTGCAG CAAAGCCTTC AACTGGATA TAAGAAATCT CTTTGAGTTT	5400
GAGACTTGCT TCCATGGCTA CGTAGTAATC TTGACCACGT CCGATGTAAA AGGCGTTACG	5460
AGTTGTTTCA AGAAGTTCAC GAACCTTGAC TTCAATGGT TCTTCTCTG AAAGAGTTGA	5520
TTGATAGAC TGAGCTACGA TTGACAATTC ATGAACCAGG TCAAAGGCTT GCGCTTAGC	5580
ATTACCATTT GCTTCTCCGA CTGCTTTTGC AAGGAAGGCA AGGGCTGCGA TTTGCGCTGT	5640
ATAGGCTTTA GTTGATGCCA CGGCAATTC AGGACCTGCG TGAAGGAGCA TGGTATAGTT	5700
GGCTTCACGT GAGAGGGTTG AACCTGGAAC GTTGTCACT GTTAAGCTTG GAATCCCAT	5760
TTCAATAGCC TTGACCAAAA CTTGACGACT ATCCGCTGTT TCACCAGATT GGCTGATAAA	5820
GATGAAGAGT GGTTCCTTGC TGAGAAGTGG CATACCGTAG CCCCCTCAG ATGAGATTCC	5880
AAGTTCAACT GGTGTATCTG TCAATTCTC CAACATTTTC TTAGAAGCAA ATCCTGCATG	5940
GTAAGATGTT CCAGCTGCAA GGATGTAGAT GCGGTCTGCG TCTTGAACAG CCTTAATGAT	6000
ATCTGGGTCT ACGACAATT GACCAGCCTC ATCTGTGTAG GCTTGGATGA GTTCCGCAT	6060
AACAGTTGGT TGCTCGTCAA TTTCCTTGAG CATGTAGTAA GGGTAAGTTC CCTTACCGAT	6120
ATCTGACAAG TCAAGTTCAG CAGTGTAGCT AGCACGCTCA CGACGATTTC CATCATAGTC	6180
TTGAACCTCC AACTATCAG CTTGACGAT TACCAACTCT TGGTCATGGA TTTCCATGTA	6240
TTGGTTAGTT TCACGAATCA TAGCCATGGC GTCTGAGCAG ACCATGTTAT AGCCTTCTCC	6300
AAGACCAATC AAAAGTGGTG ATTTATTTTT AGCTACGTAG ATGACTTCAG GATCTTGTGA	6360
GTCAACCAAG GCAAAGGCAT AAGAACCACG GATGATGTGA AGGGCTTTTT TGAAGGCTTC	6420

612

AAGAACTGAG AGCCCTTCTT CTTCCGCAAA TTTTCCAATC AAATGAACGG CTATTTTCAGT	6480
ATCTGTCTGC CCCTTGAAGT GGTGACCTGC AAGGTATTCT TCCTTGATTT CAAGATAGTT	6540
CTCAATCACC CCATTATGCA CCAAGACAAA ACGTTCCGTC TCAGAGCGGT GTGGGTGAGC	6600
ATTGTCCTCA GTTGGTTTTT CGTGAGTAGC CCAACGAGTA TGTCCGATAC CAGTTGTTCC	6660
CTCAACACCA GCTGTCTTGG CAGACAATTC TGCAATACGA CCAACCGCCT TCACCAAATG	6720
GTTATCAGCA CCATCTAGGA CAAAAATTC CGCAGAATCA TAGCCACGGT ATTCAGGCTT	6780
TTCAAGCCCT TGAATCAAAA TATCAGTTGC ATTTGTGTTT CCAACAACAC CAACAATTCC	6840
ACACATAGTA TATACGACAC AGGCAAGCTG TGCTTTCTCC TTAAAATTGG TATAGTCTAA	6900
TTCATCTTTT ATAGAATCAG CAAAAACAGT ATATACTTGT TTCTTTCACT TGTCAAGAGT	6960
AAAAATTGGT ATAGTTCAAA TTAAGCTCCT GTAAGCATAA AACTCTGAC CGATTGGGAT	7020
AATCAGTCAG AGTCCTTTTT AAAATCCATT ATTATCGCTT AATTCITTGA ACCAGTGGCC	7080
TGATTTCTTC AGACGACGTT CTTGCGTTTC CAAGTCTAAT TCGACCAAAC CATAGCGATT	7140
TTTATAGCTG TTGAGCCATG ACCAGCAGTC AATAAAGGTC CAAATCAAGT AGCCCTTACA	7200
GTTGGCACCA TCTTCAATGG CACGGTGAAG TTCACGAAGA TGACCTTTTA CAAAGTCAAT	7260
ACGGTAATCA TCTTGAATCA TTCCATCTTG ACGGAATTTT TCTTCCCCTT CAACCCCAT	7320
ACCATTCTCA GTCAACATCC ACTCAATATT GCCATAATTT TCCTTGATAT TTTGGGCGAT	7380
GTCATAAATC CCTTGCTCAT AAATCTCCCA ACCACGGTGA GAATTGATTT TACGTCCAGG	7440
CATCACATAA GGCTCGTAAA AATGTTCTGG TAAGAGTGGG CTCTCTGGAT GCTTAGCAAA	7500
TCGAGGAGCC ATAACACGCA AAGGTTGATA GTAGTTCACA CCAAGGAAGT CCACCGTATT	7560
ATCACGAATG AGTTCCAAT CTTCCTCTGT AGCATCAGGT AAAAGACCGT GTTCATGCAA	7620
GATTCTTACC AACTCCTGTG GATAAGTCCC CAAGACAGAT GGATCTAAGA AAGATTGGGC	7680
CTGAAAAGG GCCGCAATAC GAGCTGCCTT GACATCAGCA GGATGCTGGC TACGTGGATA	7740
AGCCGGTGTC AAGTTGAGGA CAATCCCAAT CTTGGAATCA GGCAAAAGTT CATGGCAAGC	7800
CTTAACAGCC CGGCTGCTGG CCAATTGTGT ATGATAGGCT ACCTTAACAG CTGCCTCTGC	7860
ATCCACCTTA TGTGGATAAT GGGCATCATA AAAATAACCA AATCTACAG GAACGATGGG	7920
CTCGTTAAAG GTAATCCATT GATCCACTAA ATCTCCATAA GTCTCAAAAC AAAACGAGC	7980
ATAGTCTTCA TAGGCTGAGA CTGTCGCCTT ATTTTCCCAA CCATCACCAT CCTCTTGAAG	8040
GGCAAAAGGT AAATCAAAAT GATAGAGATT GACTAACAGA CGAATTCCTT TAGCCTTAAT	8100
AGCCTCAAAG ACCTTACGAT AAAAATCCAC ACCTTGAGTG TTGACTTTTC CACAGCCTTG	8160
TGGA AAAATC CGTGACCACT GAATAGAAGT CCGAAAGGCT GTGTGACCAG TCTCTAACAA	8220

613

AAGCTCAATA TCCCGCTCCC AATTTTCATA AAAAGTCGAT GTCTTATCTG AACCAATCCC	8280
ATTATAGTAA CGATTTGGCT CCACTTGGAA CCAGTAATCC CAGAGATTGT CTCCCTTACC	8340
GTCACCAGCT ACACGTCCTT CTGTCTGCGG TCCAGAAGTA GAGGATCCCC AGACAAAATC	8400
CTTTGGAAT CTAGCATAC ATTTACCTCT TTATCTACTC ATTTCTCCCA TTATACAGAA	8460
AAAACAAGGT AAAAAGTAGT TACATTTTTT CCTTGTTTTT CTTCTGATTA TAGTTTTTAT	8520
TTCTTGCTTA GGATTTCAAG CGTTTCAAGC ACGTTATCTG CATGAACCTC AATGGTGTC	8580
CCAGTTGCCT TGATCTTAAC TTCTACAATG CCATCGGCCG CTTTTTTTACC AACAGTGATA	8640
CGGATTGGAA GACCAATCAA GTCATATCG CTAAATTTAA CACCGACACG TTCGTTACGG	8700
TCATCTGTCA AGACTTCATA ACCAGCTCCC ATCAAGCTTG CTTCAAGTTT TTCTGTCAAG	8760
GCTTGCGCTT CTTCATCCTT GACATTGACA GTAATCAAAT GCACATCAA TGGTGCCAAT	8820
TCTTTAGGGA AATTGATTCC CCAAGCGTAA CGGTATTAC CTTTGGCGT TTTGTAAACA	8880
AAGAGGCGAG CGTGTGCTC CATCACTGCT GAAAGAAGAC GGCTGACACC GATACCGTAA	8940
CATCCCATGA TGATTGGCAC AGCACGACCA TTTTCATCCA AGACATCTGC TCCCATGCTT	9000
GCTGAATAGC GAGTTCGAG TTTGAAAATA TGACCGATCT CAATACCACG CGCAAAGTTA	9060
AGGACACCTT GTCCATCTGG GGAATTTCA CCCTCACGAA CTTACGGAT ATCCACATAT	9120
TCTGCAGTAA AATCACGGCC TGGGTTCA CAAGTCAAGT GGTAGTCATC TTCGTTAGCA	9180
CCGACAATG CATTGCGAAC ATCTGTACC TTACGATCTG CAATAATTTT AATATTCTCT	9240
GGCAAACCAA CTGGTCCAAG TGAACCAAAT CCTGCTTGAA CAACATTCGC CACTTCTTCT	9300
TCGCTAGCAA CGTCAAAGAA ATCTGCTCCC AAGTGATTTT TCAACTTGAC TTCGTTGAGT	9360
TGGTCATTTT CAACTAGAAG GGCTGCAACA AGCTCACCAT CTGCAATGTA GAAGAGGGTT	9420
TTAATCGTTT GTTCTTCTGG AACATTGAGG AAGGCTGCAA CTTTCATCAAT TGATTTAACA	9480
TCTGGCGTTG CAACACGAGT AACTTCTTCT TCAGCGACAA CACGGTTGCT TGGTTTGATC	9540
TCGTTTGTG CCATTCTTAA GTTAGCTGCA TAGCTAGACT CACTTGAGTA AGCAATGGTA	9600
CTTTCACCAG AGACTATCCA TTTGAGCAAT TCTGCCTTGA TTTCTTCTTG CACTTCTGCA	9660
GGAAATTCGT CAAATGAGGC AACTGACTTG TCCAAGACAA CCCAGCGGTC AAGGTCTGTA	9720
CGAGCAGATG TAATGGCCAT AAATTCTTGG CTATCCTTAC CACCCATGGC TCCACCGTCA	9780
CCAATAATAG CCTGAAGTC TAAACCACTA CGAGTGAAAA TACGCTCATA GGCTGCTTTG	9840
TACTCATCAT AAACACTATC CAACTATCA TAGTTAGCGT GGAAACTATA AGCATCCTTC	9900
ATGATAAACT CACGTGTACG AAGAAGTCCA TTACGCGGCG GTTTTTTCATC ACGATACTTG	9960

614

GGCTGAATTT GATAAAGGTT GAGTGGCAAT TGCTTGTAAG ATTTAACAGA ATCACGGACA	10020
ATAGCTGTAA AGGTTTCTTC GTGAGTTGGA CCTAAGATAA AGTCTGATTT TTCACGGTTT	10080
TTTAGTTTGT AAAGGTCTTC ACCATAGGTT TCGTAACGAC CTGATTCACG CCACAATTCT	10140
GCACTAAGAA GGGCTGGAGC CAACATCTCA ACAGCACCAA TCTTTTCGAA TTCTTGCGC	10200
ATGATGTTTT TAGCTTTTTC AATCACACGG TTGGCAAGTG GTAGATAAGA ATAAACACCT	10260
GCTGAAACTT GGCGAACATA ACCAGCACGC AACATAAGAG CATGGCTGAT AACTTGAGCA	10320
TCGCTTGGA TTTTCGGAAG CGTTGGGATA GGCATTTTAC TTTGTTTCAT AATATTCCTC	10380
GATTATCTAA AAAAGAGTCG CATAATGTCA TTCCAAGTCA CAGCAATCAT CAAGACAACC	10440
ATGATGACCA CTCCGGCCAA GGTGACATAG GTTTCAATTT CTTGTTTCAA TGGTTTGCGG	10500
CGGATGGCTT CTAGGATATT GAGCACAATC TTACCACCAT CCAAGGCTGG AATCGGAATA	10560
AGATTAAAAA TCCCAATATT GATGGAAATC ATTGCCAAGA AGTACAAGAT ATTTTCAATT	10620
CCATTTTTAG CAGCATCACT ACTTGCCTTA AAGATAGCAA CAGGTCCACC CAACTTGTTT	10680
AAATCTGGTT GGAAATCAG ATTTTTCAGA GCTGAGAGAA TTCGGAGAGC TGAGTCAGCA	10740
GCAGTTGTAA AACCACCTAC AAACATGGAT AGAAAATCTG ACTTAACCCC CGGTTGAACA	10800
CCTAGAAGGT AACGACCTTG ACTATCTTTG GGTGTAACAG TGACTTGTTT GTCACCTCCC	10860
TTTTTCAGAAA TAGTCACATC CAAAGTCGGT GCCGTCTTAT CTTTGGTTTC TGTTTCCACA	10920
GCTTGATCA AGCTTTCCCA GTTGCTAACC TCATGTGAGC CAATCTTGGT AATTGTGACC	10980
ATTTCTGGTA CTCCTACCTT GGCCAAGGCA CCTTGGGGCA TGATATGGAA CTGATTGGTA	11040
TCAACATCTC TGACACCACC CTGCATAAAG ATTAATAACCC AAAAAACAAC GACACCTAAG	11100
ATAAAATTGT TCATAGGACC TGCAAAATTG GTAATCAGTT TGCCCCAGAT AGTCGCATTT	11160
TGATATTGAA CATCTAAAGG TGCAATCCGA ACCTCAGTAC CATCTGCTTC CACAACCGTT	11220
GCATCGTGAT CCACTGCAAA TGTTTTTTCT TCTTCCAGAA CCAATCCTTT GATAAAGAGC	11280
TTGTCTTCAA AATCAAACCTG GGTACCTGC ATAGGGAGGG CTGTTTGATC CAATTTTTTA	11340
CCTGAGAGAT TGATGCGTTT AACCTTACCA TCATCAGCAA GTGTCAAACCT AACAGGCGTT	11400
CCTGTCTTGA TTTCAGTTGT ATCATCACCC CAACCGGCCA TGCGGACATA GCCACCCAGA	11460
GGCAAGATTC GAATGGTATA GGCCGTTCOA TCCTTGCCAA TGTGAGCAAA AATTTTAGGT	11520
CCCATACCGA TGGCAAATTC ACGTACTAAA ATCCCTGATT TCTTGGCAAA GTAGAAGTGA	11580
CCGAACCTCGT GCACCACTAC AATAATCCCG AAAACCAGAA TAAAGGTTAA AATCCGAGC	11640
ATAGCGTTTC CTCCGTCTTT TGATTAAAAG AGTCCAAATA AGTGCATGAT TGGAAATACA	11700
AGCAACATAC TATCGAAACG ATCCAAAACA CCACCATGTC CAGGGATAAA TTTCCAGAA	11760

615

TCCTTAACAC CAAAATGACG TTTGATCGAA CTTTCTAGTA AATCACCAAA TTGTCCAGCA	11820
ATGCTAAAGA AAATAGCAAA GACTGACATC TTGTAAATTC CATATGGAAG AGCAACTGTA	11880
CTGTCAACTA TCATAAGGAT AATGGTACT AAAATTGCTC CTAAAATACC ACCCAAGGCA	11940
CCCTCAAGGG TTTTATTAGG CGATACCCCTT GGTGCTAACT TTCGTTTCCC ATAGTTCATC	12000
CCAACAAGAT AGGCACCACT GTCTGTCGCC CAGACGATAC ACAAGGCTAA GAGAGCCTTG	12060
TCCAAACCTG CAACACGAGC ATCTAGTAAA GCATTAAATC CAAAGCCAC GTAGAAGCTC	12120
ATAGCAAGAG GGAAAACCGC ATCCTCAATC GTATAAGACT TGCTAAAAAC GGTGTTTCCT	12180
AACATGATTG AAATCAAAAC ACTATAGGCA ACCACATTCC CATCAACTGG CAAAAAGTC	12240
AGGTAATCTT CCAAGGAAT GGTCAATGCA AAGGTTGCAA AGAGGGTCAA GAGGCCCTCC	12300
ATCGTCATGG TCTCTAGACC TCTCATCTTC AAAAGTTCAT GCATGGCTAG CATGGCTATG	12360
ATTCCGATTG CTATCTGAAG CAAGAGGCC CCAATCATTA AAATTGGTAG GAAAAAGCC	12420
AGGGCAATCC CTGCAACAA GGTTCCTTTC TGTAATCCT GGGTCATATT TCCTCCTAAA	12480
CTCCTCCAAA TCGGCGATGA CGACGATTAT AGGCAAGAAT AGCTTCCTGC AAGGCCGCTT	12540
CGTCAAAATC AGGCCATAAG GTGTCCGTAA AATAAGCTC ACTATAGGCT CCCTGCCATG	12600
GAAGGAAATT GCTCAAACGT AATTCTCCAC TAGTACGGAT AATCAAGTCT GGGTCTCGTA	12660
AGTCCTTAGG CAAATGCTGA GTAAAGAGAT AGTTACCAAT CAATTCCTCT GTGATGTCAC	12720
CTGGGTTGAT TTTGGCATCT AAAACATCCT GGGAAATCAA CTTAAGCGCC TGTGTAATCT	12780
CAGCACGTCC ACCATAGTTA AGAGCAAAAT TAAGAATCAA TCCTGTGTTG TTCTTAGTCA	12840
ATTCCTCAGC CTTGGTTAAA GCTTCAAAGG TTTGCTTAGG CAGGCGGTCT GTCTCCCCAA	12900
TCATTTGAAT CTTAACATTA TTCGCATGTA GTTCCGGGAC ATAATTATCA TAAACTCTA	12960
CTGGCAAAGT CATGATAAAC TTGACTTCCT GATCTGGACG GGTCCAGTTT TCCGTAGAAA	13020
AAGCATAGAC CGTAATAACC TTGACGCCCA GTTTGTTGGC TGCCTTGGTC ACGGTTTGCA	13080
ATGCTTCCAT GCCCGCCTTA TGTCCAAAA CTCGCGGTTG CATACGTTTT TTAGCCCAAC	13140
GGCCATTGCC ATCCATGATG ATGCCGATAT GAGCAGGAAC CTGTGTCGGA ACCTCTACTT	13200
CCACAGCCTT ATCTTTCTTA AAAAATCCAA ACATGATCTT ATTCCTATTC AAAATCTAT	13260
CGTTTCATTA TACCATATTT CCCCATTTTC TTCTATCACT AAGCTATTTA TTCTCAGGCA	13320
CCAAGCCCAT TTTTCAAAAA AATAAGCCGC CTGATTGGGC GACTTTATTT TTATAGGGAG	13380
ATTATTATGA AAAAGTTTAA GGAGTTTAAG TTAAGGTCTT CTTAACTTAT GAACTTAGTG	13440
TACACTCCCT AGCTTAAAGT TTCCTTAAAG ATTTTAAAA ATCAAATTTT TCCATTCTC	13500

616

CTGCCAATTT	TTCTTGGATA	AACGTGTTTG	ATAGAGTTCC	ATTCGGTCTT	CATTTTCTAA	13560
GAAATGAGGA	GTTGGACGAA	CTTGAAAATT	CAAAATATCC	TCCAAACCAT	AAGGTACATA	13620
GAGTTCAAAA	TCTAATTCTT	CATTCAAGCG	CAGTCCAAC	GCCGTACACC	GTTCTGGATA	13680
CTTACTCATA	GCATCACGAG	AACTGGTATA	GGAAGCAGTG	TGAGGACTGT	GCTGATGCAT	13740
ATAGACCTGA	TTTTTCAATT	CCCACTGGTA	CTGAGGAAAA	TCCTCTCTCA	GCTTTTCTC	13800
CAGTAATAAG	GTTTCCTCAT	AAGAAAAATC	TGGATCAAAG	AAAATCACAT	CTATATCTGT	13860
TTCATGATCA	AAAGGGGATT	TGTCTGACAA	AAGATTCCAG	ATGAAATTC	TGACAGAACC	13920
TGCTGCCAAC	CACGAGTCTT	TCAAACCAAG	GTCTCGGATG	ATCGTCAGAA	TGGCCATCAT	13980
ATCTGGACTT	TCTCTAAAAG	CCTCTAAGAT	TTCTTGCTTA	TTTTTCACTG	TATTCTAATC	14040
CTAAGTGCTC	ATATGCCTTA	GCAGTCGCCA	CCCGTCCAGA	CCGTGTCCGC	ATGATAAAAC	14100
CTTTTTGAAT	CAAGTAAGGC	TCATACATGT	CTTCAACTGT	CTCACGCTCT	TCGGCGATAT	14160
TCACAGAAAG	AGTTCCTAGA	CCAACAGGTC	CTCCACTGTA	CATCTCAATC	ATGGTGCGAA	14220
GGATTTTTTG	ATCCACATAG	TCAAACCTT	CATGGTCAAC	ATCCAGCATA	GTCAAAGCCT	14280
TATCGGTAAT	AACATCATCG	ATAACCCCAT	TCCCCATTAT	CTGGGCAAAA	TCGCGCACGC	14340
GCTTGAGGAG	ACGATGGCA	ATACGAGGGG	TTCCACGACT	ACGTAGGGCC	AACTCAGATG	14400
CTGCCTCATG	GGTGATTTCC	ATCTCAAAA	TATCTGCCGT	CCGCTCGACA	ATTCTGTCA	14460
AGTCAGCATG	AGCATAATAC	TCCATATGAC	CTGTAATCCC	AAAACGTGCC	CGTAGTGGAT	14520
TTGAGAGCAT	ACCAGCCCGA	GTCGTCGCAC	CAATCAAGGT	AAAAGGAGGC	AACTCCAAAT	14580
GAACACTGCG	ACTGCCTTCA	CCAGCCCAA	TCATAATATC	GATGTAGAAG	TCCTCCATGG	14640
CACTATAAAG	CACTTCTTCC	ACTGACATGG	GTAAGCGATG	AATCTCGTCA	ATAAAGAGGA	14700
CATCTCCAGG	CTCTAAATCA	TTCAAAATCG	CTACCAAATC	ACCCGCTTTT	TCGATAACAG	14760
GACCAGACGT	TTGCTTGAGA	TTGACTCCCA	GTTTATTGGC	AATGACAAAA	GCCATGGTTG	14820
TTTTCCCAAG	CCCTGGAGGG	CCAAATAAGA	GCACATGATC	CAGCGCTTCA	TCCCGCATTT	14880
TAGCGGCTTC	GATAAAGATC	TGAAGTTGAT	CCTTAACCTT	ATCCTGACCA	ATATATTAC	14940
GTAATACTG	AGGACGGAGC	GTGCGTTCTA	CTAACTCCTC	ATCACCCATC	ATCTCATTAT	15000
CTAAATTTCT	ACTCATGGCT	CTATTATATC	AAAAAAAACA	AGCCACAAAC	AAAAAAGCCA	15060
CCTGATTGGG	TGACTCCTAA	GTTTAGCACT	TATGTGGTAT	AATATTATAC	GGCACTTCTA	15120
CACCGCCTAC	GAAAGGAGGT	GAGATAGCCC	ATGATGGAAT	TAGTACTCAA	AACTATTATC	15180
GGACCAATTG	TGGTCGGTGT	CGTTCTTCGT	ATAGTCGATA	AATGGCTAAA	CAAGGACAAA	15240
TAGTGTCAAA	AAAGACCTCA	AGCTTATTTG	GTCGTGAGCT	TGGGGTCTTT	TCTAGCCTAT	15300

617

GATATAGAAC TAGTACTCAA TTCCTTTTTA TTATCCCATTA GTTCACGAAT TTTGTCAAAA 15360
 CTTTACATTT TCTTCAACCG CTGTACGACA AGACGGTTAA GATTAAGAGA ACGTTAGGGA 15420
 TTCTATCAAT TTCATAGAAA TTTTGATTTC GTAAACGAAG AGACAATCTT ACATGTCCT 15480
 TCTCATTTAA TACGCCACTA CTAGACAAGC AAAATCATT TACAGTAGT TCCAGTCCTT 15540
 CAATTAAACAG TCACTTACAA TCAAATTGAG TTTGAACTAG CTGAAGCGAC CACAGACCTA 15600
 TTTCTTAGTC ATATTCGCTA AAAAAATCCC CGCCAAAATC TCAAAAAGTC CCCGCCAATT 15660
 CCCCAGCAA AATCCGAAAA ATACCGAAAA ATATCGAAAA ATTATTTTGA GAATAGTCCC 15720
 AAAAACTCTG AAATAGAGCT AAAAACTCC ACCTGATTTC GTGGAGTTAA GGGAGATTAT 15780
 TATGAAAAAG AAAAGTTTAG GATTTTATTA AATAAAGTTA GGAGGTCTTT ATTTAATAAC 15840
 TACATGATAC AAGACGAAAC TTAATACTAG CTTAACTTTT CTAAAATTTT ACTATTTTGC 15900
 AAAAAATTC TATCACCAGC ACCTCACCAA TCGAGTAGGG GATAATCTCT AGCCCCCTCTC 15960
 ACACCACCGT ACGTGCCGTT TGGCATACGG CGGTTCAACT AACTTTTAAC GCATGTCGTT 16020
 CAAGGTAATA ATCCAAACAC GAAACCAGTC CACGTTTTTC CAGGACTGGT TTTGATATAG 16080
 CACGTTTAAG TACCGACTTC TGAGCTACTA ATTGATAATG GTCGCCCCAG CCAGATACCT 16140
 TATCTGCTAT CCATTTAGGA ACTCCTAACT TAAGCAATCC CCATAATCGT CTCGATTCTT 16200
 TCTTCCATTG CTTCCAGATA ATCACTCGTA GCGAGTACG CAAGCGCTCA TCTATGCTGG 16260
 CGACTATACT TTTCATATTT CCCAATGAGC AATAGTTTAT CCATCCTCGA ATAGACAAAT 16320
 TCAGTTGCTC AATACGTCTT GTTAGGTCTA TACTCCATTT CCTCTGTGTT AGTTTCTTCA 16380
 ATTTAACTT AAATCTCCGA AACTATCTT GATGTGGACG GCTTTTCCAA CCATCTGATA 16440
 ATTTCCAGAA CCCAAAACCT AGATATTTCA ACTCTCTTGG TCATGTTTAC TTTCAAACCT 16500
 AGCCGTTTCT CAATAAACGA CTGACTGAAT ACATC 16535

(2) INFORMATION FOR SEQ ID NO: 75:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 8136 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

CCAGAGCGTT GCGTCCGAAA GTCTATCCAG ACACGGCTCT TTA AAAACAA AAGGAGAAAT 60
 GATGCATACT TATTTGCAAA AGAAAATTGA AAATATCAAA ACAACCCTAG GTGAAATGTC 120

618

AGGTGGTTAC CGTCGTATGG TTGCGGCTAT GGCTGATTTA GGATTTTCAG GAACTATGAA	180
GGCTATCTGG GATGACCTCT TTGCCCATCG TAGTTTGGCC CAGTGGATTT ATTTGCTGGT	240
TTTAGGAAAGT TTTCTCTCTT GGCTGGAGTT GGTTTACGAA CATCGTATTG TTGACTGGAT	300
TGGGATGATT TGTAAGCTGA CAGGGATTAT CTGTGTAATC TTTGTATCGG AAGGTCGAGC	360
AAGTAATTAT CTTTTTGGCT TGATTAACTC TGTATTATAC CTTATTTTGG CCCTACAGAA	420
AGGCTTTTAT GGTGAGGTGC TGACGACACT TTACTTCACA GTCATGCAGC CAATTGGACT	480
TCTAGTTTGG ATTTATCAGG CACAGTTTAA GAAGGAAAAG CAGGAGTTTG TCGCGCGTAA	540
ACTGGACGGC AAGGGCTGGA CAAAGTATCT TTCCATTAGT GTGCTTTGGT GGTGGCCTT	600
TGGCTTCATT TATCAGTCTA TTGGTGCCAA TCGTCCCTAT CGTGATTCAA TCACAGATGC	660
AACCAATGGG GTAGGGCAA TCCTCATGAC AGCTGTTTAC CGTGAACAGT GGATATTCTG	720
GGCGGCTACC AATGTCTTTT CAATCTATCT CTGGTGGGA GAAAGCCTGC AAATTCAAGG	780
GAAATATCTA ATTTATCTCA TTAACAGTCT AGTTGGTTGG TATCAATGGA GCAAGGCAGC	840
TAAGCAGAAT ACTGATTAC TTAAGTAGGA AAAGATGTTT GAAAGTGCTG TTTTGAGATT	900
TCGATTAAAA CAGATATAGT TGATAATCAA GGATTTATAG TATGAAAAAG AGGATCGGCG	960
GGTCTCTTTT TGTGTGTA AAGATAAAAA ACTCAGTAAC CTAGAAATAA GACAACTGAA	1020
GCTTTACTCT ATATTCAATT TTTAGGAATG AGAAGGTCTA GATAAAATTG GACAACTTCC	1080
TGGTCTGTGA AATCTTGACC TTTTGTGAGC CACCAGGTCA ATGTCTCGAT AAAGTTGGAC	1140
ATGACCAAGT GTTGGAGGTA AGAAGTAGGC AGATTAGGGT GGGCTTCTTT TAAATTATCA	1200
GCTAGCACGG AATAGACATG GTGTTCTAGC TCTTTATGGA GTTGACGGAG GAAGTAGTCA	1260
TTTTTGAAA ATAGCAGACT GGTGATATGG TCTTGGTTTT TATGAAAATG GAGAAAGAGG	1320
TGGGCGAGGT AGTCCTCGGT TGAAATGGCT TGCTCTCTTT CAAAAGATG ATGGAAGAGG	1380
TAGCGGCAGA GCTGGTCCAG AAGAAGCTCC TTACTCTCAT AGTGACAGTA AAAGGTGGAT	1440
CGTCCCACAT CTGCGAGATC AATGATATCC TGAACAGTAG TGGCCTCGTA GCCCTTAGCA	1500
TTCAAAAGTT GTATAAAGC TTGATAGATG GCTTTTTTGG TTTTGCTGAT ACGGCGGTCA	1560
ATGTTAGTCA TATGGACACT TAAGGCAAAT TGTTGAGAAC TGAATAAAGC TGACGTTTGG	1620
CTTCTATCCT TTCTTTGAGT TTTAGTGGAT AATGATAATG AACAAGGTGT TCATAAATCT	1680
ATTATAACAA AGGAATGAGA AATATGAAGG CAAAATATGC TGTTTGGGTG GCTTTTTTCT	1740
TAAATTTGAC TTATGCCATT GTTGAGTTTA TTGCAGGTGG AGTATTTGGT TCTAGCGCTG	1800
TTCTTGCTGA CTCTGTGCAT GACTTGGGAG ATGCGATTGC AATTGGAATA TCAGCTTTTC	1860
TAGAAACAAT CTCCAATCGT GAAGAAGACA ATCAGTACAC CTTGGGCTAT AAGCGGTTTA	1920

619

GCCTGCTAGG AGCCTTGGA ACAGCTGTGA TTCTCGTAAC GGGCTCTGTT CTAGTCATTT	1980
TGGAAAATGT CACGAAGATT TTGCATCCGC AACCAGTCAA TGATGAGGGG ATTCTCTGGT	2040
TAGGAATTAT TGCGATTACT ATCAATCTGT TAGCGAGTCT GGTGGTTGGT AAGGGAAAGA	2100
CAAAGAATGA GTCTATTCTG AGTCTGCATT TTCTGGAAGA TACGCTAGGG TGGGTAGCTG	2160
TTATCCTGAT GGCGATTGTT CTTGATTTA CGGACTGGTA TATCCTAGAT CCTCTTTTGT	2220
CCCTTGTCAT TTCTTTCTTT ATTCTTTCAA AAGCCCTTCC ACGTTTTTGG TCTACACTCA	2280
AGATTTTCTT GGATGCTGTG CCAGAAGGTC TTGATATCAA GCAAGTAAAG AGTGGCCTGG	2340
AGCGATTGGA CAATGTGGCC AGCCTTAATC AGCTTAATCT CTGGACTATG GATGCTTTGG	2400
AAAAAATGC CATTTGCCAT GTTTGTCTAA AAGAAATGGA ACATATGGAA ACTTGTAAG	2460
AGTCTATTCTG AATTTTCTTA AAAGATTGTG GTTTTCAAAA TATTACCATT GAAATTGATG	2520
CTGACCTAGA AACTCACCAA ACCCATAAGC GAAAGGTGTG TGAAGTGGAA CGGAGTTATG	2580
AGCATCAACA TTAGAAAAAA GTGAAAAATA CTTGGGTACT ATCTTATTTG GAATAGAGTA	2640
ATTTCTTTAT TATTTAAATA TTTCAAAAAT TGGTAAGAGA AGAGCATTGT ATAACTCCA	2700
GATATATGAT TGTTAATGAT AAAAATTTTT CGATTAGATA CAAAATGCTT GACTTGAGT	2760
CAACTCAAAG TTATATAATA AGATAAGTGA GTTAGAATAG CGTGAATTCA GTGAATGAAA	2820
TGAGAGGAGG TTAGCGTGTG AATATTAAAT CTGCCAGTGA TTTGTTGGGA ATTTCAGCGG	2880
ATACGATTCTG GTATTATGAA CGGGTTGGTC TTGTGCCACC GATTACTCGT ACTGCTACTG	2940
GGATTCTGTA TTTTCAAGAT CAGGATATCG AAGCGCTGGA ATTTATTAAG TGTTCCTGTT	3000
CGGCGGGTGT CTCTGTAGAT AGTTTAGTTG ACTATATGTC GCTCTACCAA AAGGGAGATG	3060
AAACGAGAGA GGAGAGGCTT GGTATTTTAG AAGAGGAAAA GCAAAAATTA GAGGAGCGCT	3120
TGTCTCAGCT ACAGACAGCT TTAAATCGTT TAAATCTCAA AATTAAACTT TATAAGGAAG	3180
GAAAATTTTA AATGAAATCA GCAGTATATA CAAAGGCAGG TCAGGTTGGA CTTGCTAGCA	3240
TTGAACGTCC GCAAATAATA GAAGCGGATG ATGTGATTAT TCGTGTGGTT CGTGCCTGCG	3300
TTTGTGGTTC AGATTTATGG AGGTACCGTA ATCCAGAAAC GAAAGCTGGA CACAAAAATA	3360
GTGGACACGA AGCGATTGGG ATTGTTGAAG AAGCTGGGGA AGCCATTACG ACGGTGAAAG	3420
CAGGTGATTT TGTGATTGTC CCTTTTACAC ATGGATGTGG TGAGTGTGAT GCCTGTCTTG	3480
CTGGATTGTA CGGTTCTTGC GACAATCATA TTGGCAATAA TTTGGGGGGT GATTTTCAGG	3540
CAGAATATAT TCGCTTCCAC TATGCAAACT GGGCGCTGGT TAAAAATCCCT GGTCAACCTT	3600
CTGACTATAC AGAAGGGATG CTAAGTCCC TTTTGACTCT TGCAGATGTC ATGCCGACAG	3660

620

GCTATCATGC	GGCGCGTGTT	GCAAATGTTT	AAAAAGGGGA	CAAGGTTGTT	GTTATCGGTG	3720
ATGGGGCTGT	TGGTCAATGT	GCTGTCAATG	CGGCTAAGAT	GCGTGGAGCA	TCACAAATTA	3780
TCCTTATGAG	CCGTCAATGA	GACCGTCAAA	AGATGGCTAT	GGAGTCAGGT	GCGACAgcTG	3840
TTGTTGCAGA	ACGTGGTCAA	GAAGGAATTA	CCAAGGTGCG	TGAAATCCTC	GGTGGAGGAG	3900
CAGATGCAGC	ACTTGAATGT	GTTGGTACGG	AGGCTGCTAT	AGAACAGGCG	CTAGGTGTTT	3960
TTCATAATGG	AGGGCGTATG	GGCTTTGTAG	GAGTCCCACA	CTATAATAAT	CGTGCTCTTG	4020
GTTCGACATT	TATGCAAAAT	ATCTCTGTAG	CAGGTGGGGC	AGCTTCTGCT	ACAACATACG	4080
ATAAGCAATT	TTTACTAAAA	GCCGTCCTTG	ATGGTGATAT	CAATCCAGGT	CGCGTCTTTA	4140
CTTCAAGTTA	TAAACTGGAA	GATATCGACC	AAGCCTATAA	AGATATGGAT	GAACGTAAGA	4200
CAATTAAGTC	TATGATTGTA	ATCGAATAAA	AAACGAATAG	GAGTTTGTAG	ACTCTATTTC	4260
TTTTTTTATG	TATCCTATTC	TTGATTTAGG	GTACTTTCTC	TTAATGTCAG	TCTGGTTCCC	4320
AGCATGGTCA	GGCTAGGGAT	TTTCCGACCG	TGGAGGACTT	CCTTGTTAAG	AATATCCATA	4380
CCTGCTCGGC	CCATTTCTTC	AGTATAAACT	GTAATACTAG	AGAGGGGAGG	ATAGACCTGT	4440
TTGGTCAGAC	TAGTGTCTGT	AAAGGAAATG	AGGCTGACGC	GATCTGGCAG	GCTGATTCCA	4500
GCTTCTTGGA	GGGCACGGAG	GGCACCAGTA	GCTAAACTAT	CGCTGGCTGC	GAAAAATGCT	4560
GGCGGAAGTT	GGTCTCCCAA	GCTCTGAATG	GCCTCCTTCA	TTAAGTCATA	GCCAGACTGG	4620
GCAGTAAATC	TTCTTTGAAA	GACCAGTTCA	TCATGATAGA	TTCCCCTCGC	TTGACTATAG	4680
TTTTTTGAAG	TTTCTAGACG	CTTGTCCTGA	ATGATTTCTT	CTTGGTCTGT	TGTTTCTTCA	4740
AGGCCTGTTA	GAATCCCGAT	ACGGTCCATT	CCTTGACTGA	GGAAATAATC	GACAACCTGT	4800
TTTCATAGCAG	TGTAAAAATC	CGTGATAATA	CAGGTATGTC	CCAGGGAAAG	TGTATCGCTG	4860
TCTAGAAATA	CAAGAGGCTT	TTGGTATTCT	TCAAAGGCAG	AAATCTGAGC	TCGACTAAAC	4920
TTTCCGATGC	AGAGAATCCC	AATCACTTCC	TCGCTTAGGG	TAAAAGGGTG	GTCATTAAAA	4980
TAGCGCAAGA	TATCATAGTC	CAACTCTTGG	GCTCTTTTTT	CTATTCCCTAG	GCGAATCTGG	5040
TAGTAGTAGA	GGTCGTCCAG	CTCCCCTTGT	TCGCTGACCC	ATTGGATAAT	GGCAATCTTT	5100
TGCTTGGGTT	TGTGGGACTC	GCCTGTCTTG	AGGTGCTTGG	TGTAGCCCAG	CTCTTCAGCA	5160
ACGGTTAAAA	TACGGTGTCT	GGTTTCTTCT	GTAACAGATA	GGCTCTGGTC	GCGGTTGAGG	5220
ACGCGGGATA	CGGTCGCGAT	AGAGACAGAG	GCTAGCTGTG	CAATGTCTTT	TAAGGTAGCC	5280
ATAAATCCTC	CTTGATTAGG	TTAGTATATC	ATGTTTTTCT	TCTTTTACT	GATATTTTAC	5340
TAAAAATTTA	GTAAAAAGGA	TTGACCTTGG	AAAATTCCTT	GGATATAATA	GAAAGAAAAC	5400
GATTACACGT	TAAGATGGCT	TAACGGACAG	TCAAAGGAGA	ATTTCATATG	CACAACATCT	5460

621

TACTACTGAA GCCCTTCGCA AAGACTTTCT TGCTGTTTTT GGTCAAGAAG CAGATCAAAC	5520
CTTCTTTTCA CCAGGCCGCA TTAATTTGAT TGGTGAACAC ACAGACTACA ACGGTGGGCA	5580
CGTTTTTCCT GCTGCTATTT CCTTGGGAAC TTACGGTGCA GCTCGTAAGC GTGACGACCA	5640
AGTCTTGCGT TTCTACTCAG CTAACCTTGA GGACAAGGGC ATTATCGAAG TGCCTCTCGC	5700
TGACCTCAAG TTGAAAAAG AGCACAACAG GACCAATTAT CCAAAAGGTG TCCTTCATTT	5760
CTTGCAAGAA GCTGGGCACG TGATTGACAA AGGTTTTGAT TTTTATGTTT ATGGAATAT	5820
TCCAAATGGT GCTGGCTTGT CTTCTTCTGC ATCCTTGGA CTCTTGACAG GAGTCGTGGC	5880
TGAGCATCTC TTTGATTAA AATTAGAGCG TCTCGATTG GTTAAAATCG GCAAACAAAC	5940
AGAAAACAAC TTTATCGGAG TAACTCTGG CATTATGGAC CAGTTTGCTA TTGGTATGGG	6000
GGCAGACCAA CGTGCTATTT ACCTAGATAC TAATACTTTA GAATACGACT TGGTGCCACT	6060
TGATTGAAG GACAATGTCG TTGTTATCAT GAACACCAAC AAACGCCGTG AATTGGCGGA	6120
CTCTAAATAC AATGAACGTC GTGCTGAGTG TGAAAAAGCA GTGGAAGAAT TGCAAGTTTC	6180
CTTGGATATT CAGACTCTGG GTGAATTGGA CGAGTGGGCC GTTGACCAAT ATAGCTATCT	6240
GATTAAAGAT GAAAATCGTT TGAAACGTC TCGCCATGCT GTGCTTGAAA ACCAACGTAC	6300
CCTCAAAGCT CAAGTAGCAC TCCAAGCAGG AGATTTGGAA ACATTTGGAC GCTTGATGAA	6360
TGCGTCACAC GTTCTCTGG AGCATGATTA TGAAGTAACT GGTTTGGAAT TGGATACCCCT	6420
TGTTACACAC GCTTGGGCAC AAGAAGGAGT TCTCGGTGCT CGTATGACAG GGGCTGGTTT	6480
TGGTGGCTGT GCCATTGCCT TGGTTCAAAA AGATACTGTT GAGGCCTTTA AGGAAGCTGT	6540
AGGCAAACAC TACGAGGAAG TAGTTGGATA CGCTCCAAGC TTCTATATCG CTGAAGTTGC	6600
AGGTGGCACT CGCGTCTTG ACTAGTCAAA AGGAGGCTCT ATAGTGACCT TAGTAAATAA	6660
ATTTGTAACA CATGTCATTT CTGAAAGCTC ATTTGAGGAA ATGGATCGAA TCTATCTGAC	6720
CAATCGTGTT TTGGCACGAG TGGGAGAAGG TGTTTTGGAA GTTGAGACCA ATCTGGATAA	6780
ATTGATTGAC CTCAAGGACC AGCTGGTTGA AGAAGCCGTT CGATTAGAGA CGATTGAGGA	6840
TAGTCAGACT GCGCGTGAAA TCCTTGGTGC TGAACGTATG GATTTGGTGA CTCCTTGTC	6900
AAGTCAGGTC AATCGTGATT TTTGGGCAAC CTACGCCAC TCTCCAGAAC AAGCGATAGA	6960
GGATTTTAC CAACTCAGTC AGAAAAATGA CTACATCAAA CTCAAGGCCA TTGCTAGAAA	7020
TATCGCTTAT CGTGTTCAT CTGACTACGG AGAAGTTGAA ATTACCATCA ATCTCTCTAA	7080
GCCTGAAAAA GATCCCAAAG AGATTGTGGC AGCCAAGTTG GTGCAAGCTA GTAATTATCC	7140
TCAGTGTGAG CTTTGTCTAG AGAATGAGGG CTACCATGGT CGAGTTAACC ACCCAGCTCG	7200

622

TAGCAATCAC CGTATTATCC GTTTTGAAAT GGTTGGTCAG GAATGGGGTT TCCAGTATTC	7260
GCCCTATGCT TACTTTAATG AGCATGTGAT CTTTTTAGAT GGCCAGCATC GTCCCATGGC	7320
CATTAGTCGT CAGAGTTTGT AACGTCTGTT GGCTATCGTA GACCAGTTTC CAGGATATTT	7380
TGCTGGATCT AATGCCGACC TGCCGATTGT GGGGGGCTCT ATTCTAACTC ATGATCATTA	7440
TCAGGGAGGC CGTCACGTAT TTCCTATGGA ATGGGCTCCC TTGCAAAAGG CCTTCCGATT	7500
TGCTGGTTTT GAGCAGGTCA AGGCTGGAAT TGTCAAGTGG CCCATGTCTG TCCTACGTTT	7560
GACTTCGGAT TCCAAAGAGG ATTTGATCAA TTTGGCTGAT AAGATTTTGC AGGAATGGCG	7620
CCAGTATTCA GATCCTGCAG TGCAGATTTT GGCAGAGACA GACAGGACAC CGCATCACAC	7680
TATCACACCC ATTGCCCCGA AACGCGATGG ACAGTTTGAG TTGGACTTGG TCTTGCGAGA	7740
CAATCAGACT TCAGCAGAGT ATCCTGATGG TATCTATCAT CCCCACAAGG ATGTCCAACA	7800
TATCAAGAAG GAAAATATCG GCTTGATTGA GGTATGGGC TTGGCAATCT TGCCACCACG	7860
TCTGAAAGAA GAAGTGGAGC AAGTCGCTAG CTATCTTGTA GGAGAAGCTG TTACAGTTGC	7920
CGATTATCAT CAGGAGTGGG CAGACCAACT CAAATCCCAA CATCCAGACT AACGGATAAA	7980
GAAAAAGCCC TTGCAATCGT CAAGGACTCT GTGGGTGCTA TCTTTGCGCG TGTACTTGAG	8040
GATGCAGGAG TCTACAAGCA GACAGAACAA GGCAGACAG CCTTTATGCG CTTTGTGGAA	8100
CAGGTCGGAA TTTTACTAGA CTAGGAGCTT TCTCGG	8136

(2) INFORMATION FOR SEQ ID NO: 76:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10011 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

CCCATAGTGA AGAGTGGCCA TAAGAAGGTC TTCTAGGCTT AATTAGGTT TTCGTCCACC	60
TTTTGCGTGT TTAAGTTGAT AAGCTGTTTT TAACACAGCT GAACATCTCT TCAAAAGTCG	120
TGCGCTGAAC ACCAACAAGA CATTTAAATC GTGTATCAGT TAGTTGTTTA CTGCTTCAT	180
CATTATAGA ACTACTATAC CATGTTTTGT TTCGCAGGAA GTCTAATATT GTCAAATACT	240
GGAACGCTCA TTGCTGGGAT ACGGAATAAG ATGGCCCGAG CTTCGATAAC TGGGATACCT	300
GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG	360
TCTTCGTTTA CATCTTTCAC CATAACTGCA TCACAGTGAA CATCGTAACC ACGGTTTGAA	420
AGTTCTTCTT CTAGAGCACT TTTAATTTGG TGAAGTGAGT TAACACCTGC ACCGCAGGCA	480

623

GCAAGAATTT TAATCATTTG GATTTCCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC	540
GGTTGCTTCA GCAATGTAAG CATAAAGGGC TTCTGGTTCA GAAATTTTTC ATAGGCTTTC	600
AAGATGACCA TTTCTGTGA AGAAGTCCAT TAACTGAGCA AGAATGTTCG TTTGACTTGA	660
ACTTGAATTA TTGATGATAA AGAAGAGCAA GGATACTTCT ACTTCCTTAC CTGGCGCAAT	720
CATATTATGG AAAGTCACCG GTTCTCTTAA TCGAACAACC ACCACTTTCT CAGCTAGATT	780
ATGAACAATA TCTGTGTGAG GAATCATTAC ATTTGCAAGT CCTTTCCTAG AAATCCATA	840
TATAAACCAG TTGGAATGA CTTTTCACGC GTGATCAAGG CTTACAGATA AGTTGGAGTG	900
ACAATTTCTC GTTCTTCCAA CAAGCTTGCT ACCTGATCAA AAAGTTATTC TTGATTATCC	960
GCTTCTAAGC AAAACACAAG GTTTTTGTCA AAGAAATAAT CTAATACCAT AAGGTTTTCC	1020
CTTCTTTCCA TTAACCTTAT GCTATAAGTA TAACACTATA TGAAATCGTT GTTAATTACT	1080
TTCTATTCTT TTTTGTCTCT TTTTTATAT TTTTGTTTG TTTATAGTTT GTTATATAAA	1140
AATAAACACA CAAACAAATA CTCCAAGCAT TTTTCTGTTC TAATACTCAA TGAAATCAA	1200
AGAGCAAAC AGGAAGCTAG CCGCAGTTGT TCAAAACACA GTTTTGAGGT TGTAGATGAA	1260
ACTGACGAAG TCACTCAAAA CATGGTTTTC AGGTGTAGA TGAACTGAC GAAGCAACAg	1320
CCATACATAC GGTAAGGCGA CGCTGACGTG GTTTGAAGAG ATTTTCGAAG AGTATAAAAA	1380
CTAAAAAAGC AGACCATCTA AGCCTGCTTT ACTATTGATT CTTATATAAA TTTCTGTGA	1440
ACAAGGAAAG GCATTTCTGA TAACTTATTC TTCATCCATA CTCAAGACGC TGAGGAAGGC	1500
TTCTTGCGGA ACTTCAACTG ATCCGATGGA TTTTCATGCGT TTCTTACCAG CTTTTTGTTC	1560
TTCAAGGAGT TTACGCTTAC GAGAAACGTC ACCACCATAA CATTTAGCAA GTACGTTCTT	1620
ACGAAGGGCC TTGATATCAG TACGAGCGAC AATCTTGTGT CCAATAGCCG CTTGGATTGG	1680
AACTTCAAAT TGTTGGCGAG GGATGATTTT CTTGAGTTTA TCAACGATGA GTTCCCACG	1740
TTCTAGGCA AAGTCCTTGT GAACGATAAA GCTGAGGGCA TCCACCTTAT CTCCATTGAG	1800
AAGAATATCC ATTTTCACCA GCTTAGATGG GCGATATTCT GACAATTCGT AGTCAAAGCT	1860
TGCATAACCA CGTGTGCAAG ACTTAAGTTT ATCAAAGAAG TCAAAGACAA TTTAGCAAG	1920
AGGAATTTGA TAGATAACAT TGACACGGTT ATCATCAATA TAGTCCATAG TCACAAAGTC	1980
CCCACGCTTA CGCTGAGCTA GCTCCATTAC TGCTCCGACG AACTCCTGTG GTACCATGAT	2040
TTGCGCCTTG ACATAAGGCT CTTCAATGGT CGCAATCTTA GTTGGGTCTG GAAACTCAGA	2100
TGGGTTAGAC ACATCCATAG ACTCACCCTC GGTCAAATTA ACTTTGTAAA TAACAGACGG	2160
AGCTGTCATG ATGAGGTCAA TATTGAACTC ACGCTCTAAA CGTTCCTGGA TAACATCCAT	2220

624

ATGGAGAAGT CCAAGAAATC CACAACGGAA ACCAAATCCA AGTGCCTGAG ATGTTTCTGG	2280
TTCAAACCTGA AGACTAGCAT CATTCAGTTG CAATTTTCA AGCGCTTCAC GCAGGTCATT	2340
GTACTTGTTT GATTTCGATTG GGTAGAGACC CGCAAAGACC ATAGGATTCA TCTGCTTATA	2400
ACCATGTAAT GGTTCGCGG CAGGATTGGT TGCCAAGGTA ACGGTATCAC CCACACGAGT	2460
ATCCTGAACC GTCTTGATAG ACGCCGCAAT GTAACCAACA TCACCAGTCG CAAGGAAATC	2520
ACGACCAACC GCTTTTGGTG TAAAAATACC GACTTCGGCC ACATCAAAGG TCTTACTATT	2580
GCTCATGAGC TGAATCTTAT CACCAGGTTT GACCACTCCG TCCATGACAC GCACCTGGAG	2640
GATAACCCCA CGGTAAGCAT CGTAAACAGA GTCGAAAATC AAGGCCTTAA GTGGCGCCGT	2700
CACATCACCC GTTGGTGCTG GTACTTTTTC TACAATTTGC TCGAGGATTT CTTCAATCCC	2760
AATACCAGCC TTGGCAGAAG CCAAACTGC TTCACTGGCA TCCAAACCA TCACATCTTC	2820
AATCTCTGTA CGCACGCGCT CCGGATCTGC AGCCGGCAGG TCAATTTTAT TAATGATAGG	2880
CATGATTTCC AAATCATTAT CCAAAGCCAG ATAAACGTTG GCAAGAGTTT GAGCCTCAAT	2940
TCCTTGAGCC GCATCGACCA CCAAAATAGC ACCCTCACAG GCAGCTAGCG AACGTGAAAC	3000
TTCATAGGTA AAGTCAACGT GCCCTGGTGT GTCAATCAAG TGGAAAATAT AAGTTTCCCC	3060
ATCTTTTGCA GTGTAATTCA ACTCGATGGC ATTCAACTTA ATAGTAATTC CACGTTCCCG	3120
CTCTAGCTCC ATGCTATCCA AAAGCTGGGC CTGCATTTCG CGACTTGAAA CCGTCTCTGT	3180
TTTTTCCAAA ATGCGGTCTG CTAGAGTTGA TTTTCCGTGG TCAATATGGG CGATAATAGA	3240
GAAGTTACGG ATCTTCTCCT GTCGTTTTTT CAATCTTCT AAGTTCATGA TTCTCTTCCT	3300
TTCAGGGTAT CTATTTATTA TAAATTGTTT TTGATATTTT GACAAGACCA TACCCTGCTA	3360
GGAGTACTAA TCTTCAGCGA CAAAGCCGTC ATTTTCGATA AAGTGCTGTT CTGTCATTCC	3420
TTGGTCTGTA AAGACAATCC CGTGAAGGAC ACCACCATAA ACAGCTCCTC CATCCATTCC	3480
AATCTTGCCA TCTTCTGTAG TCCAAAGCTC AGATGTACCG CGTTCTTGCT GTAACAAACC	3540
ATAGACCGGT GTATGACCGA AGACAATGGT TTTTCCAGTA TGATTTCAG CTCCTGGGAA	3600
TGGTTTTCTA AGCCATACTT TTTTATAATC TGTGTTTCA TGCCAGTCGT CCAAGGTCAA	3660
ATCAATACCT GCGTGAACAA AGATATACTT GTCTGTCTCT ACTACAAATG GCATTTGACG	3720
AATGAATTCTG ACCAAGTCTG CCGCTTCAGC GgCAACCCGC TTGGCATCTT CTACTCCATC	3780
AACTGGTGCA TCCAAGGGAC GACCTAGGAT AGAGTTAATG GTTGTATCTC CACCATTGCG	3840
ACTATAATGG TCATAACTTT CTTCTGGGTC ATCTAGCCAA GTCAAAAACA TATACTCGTG	3900
GTTTCCGGAC AAACAGATAG CCCCTGATT GTCCACCAAG TCCTTGACCA TTTCAAGAAC	3960
ACGGTGACTA TCCTCACCTC TGTCAATCAA ATCACCTAGA AAGAGCAACT GGGGCTGACC	4020

625

ATCCCAGGTT	TTGAGAAGGT	CTTCCAGCAT	CCCAGCTTTT	CCGTGAACAT	CTCCAATTAC	4080
ATAATAATCT	GTCATCTTAT	TTCTCCCTGT	TTCTCAACAA	TTCTCTTGCT	TGCGTCAGGG	4140
CTGCTTCTGT	CACATCATCA	CCTGCCAACA	TCTTGGCAAC	TTCTTCCACT	CGCTCTTCGA	4200
CCGTCAAGAG	ACGAACAGTC	GAAACCGTTG	AATGGTCATT	ACTAATCTTC	TCAATAAAGA	4260
ATTGATAATC	TGCAATCGCA	ATTACTTGTG	GCAAAATGGGA	GATAGCCAAA	ACCTGACCAT	4320
GCTGACCAAT	TTTATGAATT	TTCTGAGCAA	TAGCTTGAGC	AACACGACCT	GAAACTCCCG	4380
TATCCACCTC	ATCAAAGACA	ATGCTAGTCT	TGCCTTCTTT	ACGTGAAAAG	GCAGACTTAA	4440
TGGCTAACAT	GAGACGAGAT	AATTCCCCTC	CAGAAGCAAC	CTTAACCAAG	GGTTTAAAGT	4500
CTTCTCCAGG	GTTGGTTGAA	ATATAAACT	CAACCATTTT	ATTTCCCTCA	CGACTGAATT	4560
TTCCCTTACT	AAAACGAACC	TGAAACTGGG	CTTTTCCAT	ATAAAGATCT	TGCAGTTCTT	4620
GTTTAATCTC	AGCTTCGAGT	TGCTGAGCCA	AATTATGACG	AGCAGAAGCA	AGTTGACCTG	4680
CCAAATTGAC	AAGATTGACT	TCCAACCTCT	TAAGCTCTGC	TTCCATGTCC	TCAGACGAAA	4740
GATTATTGCC	TGTCAAGAGA	TTGTATTCTT	CCGTAATCTT	GGCAAAATAA	AGCAAAACAT	4800
CATCAACAGT	CCCACCATAC	TTACGAGTAA	TAGTATGAAG	GAGGTCCAAA	CGATTCTCAA	4860
CCTGCATCAG	GCGATTGCCA	TCAAAATCAA	GGTCCTCAAT	GATAGCTTCC	AAACGTTTGC	4920
TAATGTCTTC	TAAAACATAG	TAGGTCTCAG	ACAGATAGCT	TGAAATTTCA	CGGTATTCAG	4980
GATCATACTC	TTCGACACTT	TCCATGTGAT	TCATAGCTGA	ACGAACATTG	GCCAGACTTG	5040
AAAAATCTTC	ATTGTCCAAC	ATACTGTAGG	CATTGGTCAG	TGTATCCGCA	ATATTTTGT	5100
GGTTGAGGAG	TTTATCTCGC	TCTTGATTGA	GAGCCAAGTC	TTCTCCAGCC	TGCAAGTTTG	5160
CTGCCTCAAT	CTCTGCCATT	TGAAATTCCA	ACATTTGAT	ACGTGCCTTG	TGTTCTGT	5220
GGTTTCTCT	GACTTCCAGA	ACCTGCTTGC	GCATTTTCCG	ATAGGCATCA	AAACTCGTTT	5280
GATAGGTTTC	TTTCAAGTCC	CAAAAAGCGG	CATCACCAAA	TTCATCCAAC	ATCTGGATAT	5340
GCAGTTGGGG	ACGCATTAAAC	TCCTCATGGT	CATGCTGACC	ATGAATATCT	ACAAGATGTT	5400
GCCCAATAGC	TCGCAAAACA	GACAGATTAA	CCATCTGACC	ATTTACACGG	CTGATACTAC	5460
GACCATTTTG	CAAGATTTC	CGACGGATGA	TAATTTATC	ACCTAATTCT	AAACCTTGCT	5520
CATCAAAAAT	TTCTGTAAA	AGACGACTAT	TCTCAACTGA	GAAAAGCCCC	TCAATCTCTG	5580
CCTTTGGTGC	ACCATGACGA	ATAACATCTG	TCGTCGCACG	AGCTCCCAAC	ATCATATTCA	5640
TGGCATCAAT	GATAATCGAC	TTCCCTGCAC	CCGTTTCACC	AGTCAGGACA	GTCATCCCCT	5700
TTTCAAAATT	GAGGGAAATA	GCCTCAATAA	TGGCAAAGTT	TTTTATCGAA	ATTTCAAGTA	5760

626

ACATATAGAC CTACCAATTT TTTACTTGTT CAAAGATTTT CTCTGCTAGA CTTCCACTTC	5820
TGGCAATGAC TAAATCGAG CTATCATCAG TCAAACAGCT AAAAATCTTG TCTGCAAAAG	5880
TCTCGATTAA CTGAGCTTTT ACAAAGCCG TATTTCTGG AATAACTTGG AGATTGATCA	5940
TCTTATCCAT CAATTCAGCC GATTCGATAT TGTCTTCAGC CAGTTGCAGA CTTTTACGA	6000
TTGATTTTGG CAATTCGTAG ACATAGGTGT TGTCTCTCAA AGGAATTTTG ACAATACCTA	6060
ACTCTTTGAT ATCTCGGGAT ACCGTCGCCT GAGTGGCAGT GATACCTGCT TCTTTCAAAT	6120
GTCTACAAT TTCTCTTGC GTGCCGATTT GATAATCTGT CACCAATCTT CTAATTTTMT	6180
CAAGTCTCTC TTTTATATC ATTTTAAAT TGACTATGCG CCCTCTCTAC TGCTTCTTTA	6240
ATCTCAGCAA GAATCTGATT GCTTGCTGAC TTTTCTTTT TCAAATACGC TAAAAATTCA	6300
ATATTTCCAT GTCCACCTTG GATGGGAGAA AAGTCCAAGC CAAGGACTGA AAAACCTACC	6360
TCTACTGCCA TAGCTGTTAC AGATTCAAGG ACATTCTGAT GAACCTTAGC ATCTCGAATA	6420
ATTCCATTTT TCCCAATCTG CTCACGTCCT GCCTCAAAC T GAGGTTTGAC AAGTGCTACC	6480
ACCTGACCTT GATCAGCCAA GACACGGTGC AAGGCTGGCA AAATCAGACT AAGGGAAATG	6540
AAACTCACAT CAATACTGGC AAAGCTCGGC TCCTGCTCGA AATCAGTCTT TTCAGCATAG	6600
CGGAAATTGA ACTGCTCCAT GCTGACAACT CGTGGGTCTT GGCGTAATTT CCAAGCCAAC	6660
TGATTGGTAC CAACATCGAC TGCAAAGACC AACTTGGCAC TATTCTGTAG CATGACATCG	6720
GTAAACCTC CAGTAGAGGC CCCGATATCA ATCGTAGTCG CGCCATCCAC CGACAAATCA	6780
AAGACCTGCA AGGCCTTTTC CAGTTTCAA CCACCACGGC TGACATACTT GAGTTTCTCC	6840
CCCTTGAGTT TTAATTCGGT GTCATCTGGA ATTTTCTCTC CTGGCTTGTC AAACCGTTCT	6900
CCATTAAGGA CTGCTACGAC TAGGCCAGCC ATCACACCTC GCTTGGCCTG CTCTCTCGTT	6960
TCAAACAACC CCTGTTTATA AGCTAGTACA TCCACTCTT CCTTAGCCAT TGATTCTCAA	7020
ACTTTCTACT ACATTACAA TCGATTCTGT TTCAAAGGGA AGCTGCTGGG CAATTTCTTC	7080
TAATTTTCA TTAGCTTGAT CCAGGGTTTG GTTACAAAAG GCAATGGACT CTTCCAAGCC	7140
CAACAGGGCA GGATAGGTG ATTTTCTGTC CTGCAGATCC TTTTGAGGTG TCTTGCCGAT	7200
TTCTCAAAA CTAGCTGTCA CATCCAGTAC ATCATCTCTG ACTTGAAAAG CAAGTCCAAT	7260
CAATTACCCC ACAGTTTCA GCTTCACCTG CATTCAGGT GACAATTCAG CTATAATAGC	7320
TGCCGCTTGG AAGGATAGG CTAGTAACTT CCCAGTCTTA TTGGCATGAA TAGTCTGAAG	7380
TTCTTCCAAA GACAAGTCT GGTGTTGCGC CTCCATATCC AAAACTTGCC CTGCTACCAT	7440
ACCCAGACTA CCTGAAGCAA GGGATAAGTT GGCAATCAAG TCCACCTTAA TCTGACTTGG	7500
CAAATCTGCC TGCGAATCA AGGCATATGA GTCTAAGAAT AAGGCATCTC CAGCCAAAAT	7560

627

GGCCATAGCT TCACCGAATT TCTTGTGATT GGTAAACCGC CCTCTTCGAT AATCGTCATC	7620
ATCCATAGCA GGAAGGTCAT CGTGAATCAA GCTCCCTGTA TGAATCATCT CTAAGGCAGT	7680
AGCTACCTGC GCGTGAGCAG GTTTGATGGT AACCTGCAAG GCTTCCAGAA CTTCTAACAA	7740
GAGAAAAGGC CGAATACGCT TGCCACCAGC ATGAATAGAA TAGAGAACAG ACTCCCGTAA	7800
ACTAGAGGCA AACTGCTGGT CTCCATAAAA ATCTTCCAAA GCCGACTCGA CAAGAGCTAA	7860
TTTTTCTTGC TTTTTCATTC AAAATCACTT TCTGTTCCGT CTTCTTGCAT GACCTTGACC	7920
AAGGTCTTTT CAGCCTTGTC CAGCGTAGCT TGGAGCTCTT TTGACAAGAC CATGCCCTTT	7980
TGAAAGGCAG TAATCGCATC TTCCAGAGCA ATTTCACCAT TTTCCAAACT TTGGACAATG	8040
GTTTCCAGTT CTGCTAGATT TTCCCTCAAAT TTCTTTTGGT TTGACATCTT TAACCTCTAA	8100
TTCTACTTGA CCATCTCGCA TCAAAAGCGT TACTTGGTCT TTTTCTTCA AACTCTCAAC	8160
CGAATCTACA ACGGACTCTT CTTTTTTGAC AATAGCATAA CCACGCGCCA CGATTGCGCT	8220
AGTATCCAAC ATGAGCAAAG CTTCCGAAAG TCGCTTGCC TCAGCAACCT TGGCGTCATA	8280
AACTAACGCC ATTTGGCTAC CTAAGAGCTT GTCCAACGT CCTAAACGGT CTTGATAGCG	8340
TTGGATTTTG GTAACAGGTG ATAATTGTAC TAATTGATGA GTTCTTGCTT GAACTAATTG	8400
TTTGTTATCA GAAATCCGAG TTCGCAAAC TTTGTTTCAA CGCAGTTGCA GTTGGTCCAA	8460
GCGTTGCAAA TAACCGTCAT ACAAGCGCTC AGGTTGTCTA AAGATAACAG ACTGACTGCA	8520
TTTTTTTCAA GCCTCTTGT TCTTAGATAG AACATTTCCG ACTGCCGTTA CCATCCGTTT	8580
TTCTTGATTT TGCAAAATGAG CTAATACATC CAACTTGGTC ACAGGTGTTG CCAGTTCAGC	8640
CGCCGCTGTT GCGGTTGCAG CGCGTCGATC TGCCACAAAA TCTGCCAAGG TCACATCCGT	8700
CTCATGCCCC AACTAGAGA TAACTGGCAA ACGAGATTCA AAAATAGCTC GTACCACAAT	8760
TTCTTCGTTA AAGGCCCAGA GATCCTCAAT AGAACCACCT CCACGACCAA TAATGAGCAA	8820
ATCCAAATCG TCCCGTTGAT TAGCACGCGC AATATTTCTA GCAATTTCTT CCGCAGCCCC	8880
TTACACCTGA ACCTTGGTCG GATAAAGAAG GATGTCAACA CCTGGGAATC GCCTGCTGAC	8940
GGTCGTGATA ATATCTCGAA TAACGGCTCC ACTACGGCTG GTTACTACAC CAATTCCTT	9000
AGAAAATTGG GGCAGAGCTT GCTTGAAGCG TTCTTGAAAC AGGCCTTCTT CTGTCAATTT	9060
TTTCTTAAGT TGTTCAAACT GAATCGCAAG CGCCCCAACC CCATCAGGCT CAGCTTTTTC	9120
AATGATGATG GAGTAGCTAC CACTTGGTTC ATAGACCTGT ACACGCCCAA TCACATTGAT	9180
CTTCATTCCT TCTTCCAGGT CAAACCCTAA TTTCTGATAA ATCCCAGACC AGATGGTCGC	9240
TTGAATAACT GCATGGTCAT CCTTTAGGGA GAAATATTGG TGAGTAGGTC GTTTACGAAA	9300

628

GTTGGAAACT TGACCAGTTA AATAGACCCG TTCCAAGTAT GGGTCTTTAT CGAATTTTCAT	9360
TTTCAGATAC TTGGTCAAAG TTGTTACCGA TAAATACTTT TCCATCTCCA CCTACTATTC	9420
ATTTACTTGC TCTTTCATGG GTATTATTAT ACCAAAAATA TGCCTAAAAA TCTCCATTTA	9480
TGTACCATTA TGAGGGAAAA ATAGAAAAAG GAGGCAAGGC CTCCACATGT GATTATTTGC	9540
TGTTTCGAGC TTCTTCCAAA ATCTTTGCAA TCTTGGTCGT CAACAGGTCG ATAGCCACGG	9600
TATTGCTAAC CCCTTCAGGA ATGACGATAT CAGCATAACG CTTAGTTGAC TCGATAAACT	9660
GGTGGTACAT TGGTTTGACC ACACCTAAGT ACTGGTTAAT AACGCTATCA AGGCTACGGC	9720
CACGCTCCTC CATATCACGC TTGATACGAC GAATAATGCG CACATCGTCA TCCGTATCCA	9780
CAAAAATCTT GATATCCATC AAATCGCGCA GACGCTTGTC CTCCAAGACC AAAATACCCT	9840
CAACGATAAA GACATCTTGA GGTTCCTGAC GATAGGTCTT GCTACTCCGT GTATGCTCTG	9900
TATAGTCGTA GGTCGGGATG TCCACCGGAC GCCCTGCCAA CAATTCCTTA ATCTGCTCGA	9960
TCATCAAGTC TGTATCAAAG GCAAAAGGAT GGTCATAGTT GGTTTTGACG G	10011

(2) INFORMATION FOR SEQ ID NO: 77:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5365 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

CGTGTGGTCT TAAAAATAGA AGACAAAGAA CAACTGTTG GAGGCTTTGT CCTTGCAGGC	60
TCAGCCCAAG AAAAAACCAA AACAGCTCAA GTTGTGGCTA CTGGACAAGG TGTTCTGACC	120
TTGAACGGTG ACTTGGTTGC TCCAAGTGTT AAAACTGGAG ATCGTGTCTT AGTTGAAGCC	180
CACGCAGGTC TTGATGTCAA AGATGGCGAT GAAAAGTACA TCATCGTAGG CGAcTAACAT	240
TTTGGCAATC ATTGAGGAAT AGAAGGAGAA AGTAAGTATG TCAAAAGAAA TTAAATTTTC	300
ATCAGATGCC CGTTCAGCCA TGGTTCGTGG TGTCGATATC CTTGCAGACA CTGTTAAAGT	360
AACCTTGGGA CCAAAAGGTC GCAATGTCGT TCTTGAAAAG TCATTCCGTT CACCCTTGAT	420
TACCAATGAC GGTGTGACCA TTGCCAAAGA AATCGAATTG GAAGACCATT TTGAAAATAT	480
GGGTGCTAAG TTAGTATCAG AAGTAGCTTC TAAAACCAAT GATATCGCAG GTGACGGAAC	540
TACGACTGCA ACAGTCTTGA CCCAAGCTAT CGTCCGTGAA GGAATCAAAA ACGTCACAGC	600
AGGTGCAAAT CCAATCGGTA TTCGTCGTGG GATTGAAACA GCAGTTGCCG CAGCAGTTGA	660
AGCTTTGAAA AACAACGCCA TCCCTGTTGC CAATAAAGAA GCTATCGCTC AAGTTGCAGC	720

629

CGTATCTTCT	CGTTCTGAAA	AAGTTGGTGA	GTACATCTCT	GAAGCAATGG	AAAAAGTTGG	780
CAAAGACGGT	GTCATCACCA	TCGAAGAGTC	ACGTGGTATG	GAAACAGAGC	TTGAAGTCGT	840
AGAAGGAATG	CAGTTTGACC	GTGGTTACCT	TTACACAGTAC	ATGGTGACAG	ATAGCGAAAA	900
AATGGTGGCT	GACCTTGAAA	ATCCGTACAT	TTTGATTACA	GACAAGAAAA	TTTCCAATAT	960
CCAAGAAATC	TTGCCACTTT	TGGAAAGCAT	TCTCCAAAGC	AATCGTCCAC	TCTTGATTAT	1020
TGCGGATGAT	GTGGATGGCG	AGGCTCTTCC	AACTCTTGTT	TTGAACAAGA	TTCGTGGAAC	1080
CTTCAACGTA	GTAGCAGTCA	AGGCACCTGG	TTTGGTGAC	CGTCGCAAAG	CCATGCTTGA	1140
AGATATCGCC	ATCTTAACAG	GCGGAACAGT	TATCACAGAA	GACCTTGGTC	TTGAGTTGAA	1200
AGATGCGACA	ATTGAAGCTC	TTGGTCAAGC	AGCGAGAGTG	ACCGTGGACA	AAGATAGCAC	1260
GGTTATTGTA	GAAGGTGCAG	GAAATCCTGA	AGCGATTCTT	CACCGTGTG	CGGTTATCAA	1320
GTCTCAAATC	GAAACTACAA	CTTCTGAATT	TGACCGTGAA	AAATTGCAAG	AACGCTTGGC	1380
CAAATTGTCA	GGTGGTGTAG	CGGTTATTAA	GGTTGGAGCC	GCAACTGAAA	CTGAGTTGAA	1440
AGAAATGAAA	CTCCGCATTG	AAGATGCCCT	CAACGCTACT	CGTGCAGCTG	TTGAAGAAGG	1500
TATTGTTGCA	GGTGGTGGAA	CAGCTCTTGC	CAATGTGATT	CCAGCTGTTG	CTACCTTGGA	1560
ATTGACAGGA	GATGAAGCAA	CAGGACGTAA	TATTGTTCTC	CGTGCTTTGG	AAGAACCCGT	1620
TCGTCAAATT	GCTCACAATG	CAGGATTGTA	AGGATCTATC	GTTATCGATC	GTTTGAAAAA	1680
TGCTGAGCTT	GGTATAGGAT	TTAACGCAGC	AACTGGCGAG	TGGGTAAACA	TGATTGATCA	1740
AGGTATCATT	GATCCAGTTA	AAGTGAGTCG	TTCAGCCCTA	CAAAATGCAG	CATCTGTAGC	1800
CAGCTTGATT	TTGACAACAG	AAGCAGTCGT	AGCCAATAAA	CCAGAACCAG	TAGCCCCAGC	1860
TCCAGCAATG	GATCCAAGCA	TGATGGGCGG	GATGATGTAA	GCTTTCTATA	GAAAACAACT	1920
TATAAAAAAC	ACAAAAGGAG	GGAATGACTA	ACCCTTCTTT	TTATAGGCTC	TTTGTCAACT	1980
GTAGTGGGTT	GAAGTCAGCT	AAGCTCGAGA	AAGGACAAAT	TTCGTCCTTT	CTTTTTTGAT	2040
GTTCAAAGCG	ATAAAAAATCC	GTTTTTTGAA	GTTTCAAAG	TTTCGAAAAC	CAAAGGCATT	2100
GCGCTTGATA	AGTTTGATGA	GATTATTGGT	CGCTTCCGGT	TTGGCGTTAG	AATAGTGTAG	2160
TTGAAGGGCG	TTGATAATCT	TTTCTTTATC	TTTGAGGAAG	GTTTTAAAGA	CAGTCTGAAA	2220
AATAGGATGA	ACTTGCTTAA	GATTGTCCTC	AATAAGTCCG	AAAAATTTCT	CCGGTTCCTT	2280
ATTCTGAAAG	TGAAACAGCA	AGAGTTGATA	GAGCTGATAG	TGATGTTTCA	AGTCTTGTGA	2340
ATAGCTCAAA	AGCTTGTCTA	AAATCTCTTT	ATTGGTTAAA	TGCATACGAA	AAGTAGGACG	2400
ATAAAATCGC	TTATCACTCA	GTTTACGGCT	ATCCTGTTGT	ATGAGCTTCC	AGTAGCGCTT	2460

630

GATAGCCTTG TATTCATGGG ATTTTCGATC CAATTGGTTC ATAATTTGAA CACGCACACG	2520
ACTCATAGCA CGGCTAAGAT GTTGACAAAT GTGAAAGCGA TCCAACACGA TTTTAGCATT	2580
CGGGAGTGAA ACAGTCTGGG AGACTGTTTC AGCCTGAGCC TAGAAATTTG AAAGCGAAGC	2640
TGTTTAGCCA AGTCATAGTA AGGACTAAAC ATATCCATCG TAATGATTTT CACTTGACAA	2700
CGAACGGCTC TATCGTAGCG AAGAAAGTGA TTTCGGATGA CAGCTTGTGT TCTGCCTTCA	2760
AGAACAGTGA TAATATTAAG ATTATCAAAA TCTTGCGCAA TGAAACTCAT CTTTCCCTTA	2820
GTGAAGGCAT ACTCATCCCA AGACATAATC TTGGAAGCC GAGAAAAATC ATGCTCAAAG	2880
TGAAAGTCAT TGAGCTGCG AATGACAGTT GAAGTTGAAA TGGCCAGCTG ATGGGCAATA	2940
TCAGTCATAG AAATTTTTC AATTAACTTT TGAGCAATCT TTTGGTTGAT GATACGAGGG	3000
ATTTGGTGAT TTTTCTTTAC CAGGGGAGTC TCAGCAACCA TCATTTTGA ACAGTGATAG	3060
CACTTGAAAC GACGCTTCT AAGGAGAATT CTAGAAGGCA TACCAGTCGT TTCAAGATAA	3120
GGAATTTTAG AAGGTTTTG AAAGTCATAT TTCTTCAATT GGTTCGCA CTCAGGGCAA	3180
GATGGGCGT CGTAGTCCAG TTGGCGATG ATTTCCCTGT GTGTATCCTT ATTGATGATG	3240
TCTAAATCT GGATATTAGG GTCTTTAATA TCGAGCAGTT TTGTGATAAA ATGTAATTGT	3300
TCCATATGAA TCTTCTAAT GAGTTGTTTT GTCGCTTTC ATTATAGGTC ATATGGGACT	3360
TTTTTCTAC AACAAATAG GCTCCATAAT ATCTATAAGG GATTTACCCA CTACAAATAT	3420
TATAGAGCCG AAAATTCACA TCTAATATAT GCAGACTACT TTGAAATGAA ATTAAAAAA	3480
TTATTAAAGG ATGACACAAA AGTTTTTGAA AAATCTACAT TCAAATTTGT AGAAGGATAT	3540
AAAATATACC TGACAGAATC TAAAGAATCT GGAATTAAC AAATGGACAA TGTCATAAAA	3600
TATTTGAGT TTATTGAATC TAAAAGTATT GCTTTATATT TTCAAAAACG ATTAAATGAG	3660
CTGATAGATT AAATAGCATT TTCTCTGTG AGATATTGTT TTTAAATAT TGTACTAAAT	3720
GATTGATGCT ATGTGGAAAT ACAAAAAAAT GTTTTGTATA CGAAGTTGAC CTGTATTTTT	3780
TATACTAATC ATTTTCGTAT TTTTGTATT AAACGATATA AGTTTGTGT AACTTACAA	3840
GGAATAAAGA CATTAAAAA TAACAGTATA TCTATTGTT TTATATATTT TACGAATTCT	3900
GCATAAATCT CTTCTAGTA ATGTGTTGTA ACTCTGCTAT AATAGATTTA TTCCTTTTTC	3960
TGTTTACACA ATTTATTTTA TAGTACCAA AAAGGTCAGG ATTTTGTTCC TGACCTTTGA	4020
CAACTTTACC GATTCTTTAG TTCTACATAG CGCTTGACC AAATGTTTAC ATAGGCTTCT	4080
GAGAAAGGAC CACGTCCATT GTTAATCCAA TCAACAAGAA TTTTGACATG TTCTTTTAAA	4140
ATATAGTCCA AGTCATCAGA ATAATTCATT TTGCGTTTGT GACGCTCGTA CTCTTCAACG	4200
TCCAAGAGAC GTTTTCCCC ATCTGTAATA ATTTAACAT CCAAATCGTA ATCAATATAC	4260

631

TTCAGTGCTT CTTTCATCCAG ATAGTAGGGG CTAGCCATAT TGCAATAGTA AGAAGTTCCA 4320
 TTATCACGAA TCATGGCAAT GATATTAAAC CAATATTTCT TGTGAAAGTA AACAATAGCC 4380
 GGTTCCTCGAG TGACCCAACG ACGACCATCA CTTTCGGTAA CAAGTGATG ATCGTTGACA 4440
 CCAATAATGG CGTTTCTGT TGTTTTGTAGT ACCATGGTGT CCCGCCAAGT TCGGTGGAGA 4500
 CTCCCATCAT GCTTATAACT TTGAATTGTA ATAAAGTCGC CTTCTTTTGG AAGCTTCATA 4560
 ACTAACCAAC TTTCTACAAT TTATAAGTTT ATCATTACT ATTGTACCAT AAAATTACCC 4620
 AAAATCTGTG AATTTCACTT GGAAATATTA AAGATATTCT CTAAGAGCGC TTGCTATATC 4680
 CGAAAAATCG TAGCCCTTTC GTGCTAAAAC TTGAGTTAAA CGCTGCTTCA GTTCGTATCC 4740
 TTCATACTTT CGGGCATACT TAGTATATTG CTTATCAAGT TCCTTGAAGA TGAGTTCCTG 4800
 AGTCGTTTCT TCATCAACTT GACTATCCAA TTCGTCAAAG GCAATTTTAG CATCAAATA 4860
 AGAGAAGCCC TTGTTAGTCA AGTTCTGGAT AATCTTATCT TGCAGGGCAC GAGCTGGAAG 4920
 TTTTCCCTCA TATTTTTTCA ATAGTTTATT GGCTACACGT TGAGCAACTT CCGAAAAATC 4980
 AAAATCATTC AAGATTCTT CTATAGTAGA TTTTGAAATT CCTTTTGTG CTAATTTCTG 5040
 AGTCAGTACA TAAGGTCCCT TGTCTCCTGA AAGTTGATTG GCATTGATGA TAGCATAAGC 5100
 GTACTGGCTA TCATTAATCC ACTTCTCTTC TTAAAGATTA GCAATGACTT GAGAAACGAT 5160
 GTTTTCATTA ATATCATATT TTTTCAGATA TTCTCTGACC TCTTTTTCAG TACGTGCTTT 5220
 AAAGGATAAG TGGTAGAGGG CCAGATTCTT ACCATAAGAA AATTGAGCAA ACTCTTGAAT 5280
 CTCTTTCAAT TCCTCTTCGC TTATCACCTT ATCTCTCGAT AACATAAAAC GAACAATTGT 5340
 GTCTTCGGTG ATATAGCATT TGTCG 5365

(2) INFORMATION FOR SEQ ID NO: 78:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3636 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

TTTCCAGAAA GAAGTTGAGT AAAGTCTTTA TCAAAGAGAA TGACTTCCGT ATTGGAAGTG 60
 ACATTAGGTT TTATTCTAC TTTACTAGCG TCCGCCCTAG CATTTTCTAA ATCTTTAATC 120
 TCTTCTGTG CCCTATTTAT AGCCAGCTGA ATAACTGCTT GAGGATTTTC ACTCAGTCCA 180
 TGAAGCTTAT CGTCCACCGA AGTATAAAGA CTCGAATGCA TGACTTGTA AATAATCAGA 240

632

GTCATTGTAG	AAAAAATCAG	GGTGAAGACA	CCGAAGTTGC	GGATAAAATA	ACTAAAGTCA	300
TCCGCATACC	ATGTTTTTTT	AAGTTTACTG	AACATCTTTT	AAAAGATACC	CAACACTACG	360
CAAAGTTTGC	AAATTCTCTG	CAAAAGTGGT	TCCCTTTAAT	TTCTTACGGA	CTTTTGAAAC	420
ATAGACTTCG	ACAACCGAAA	TCGTTGTATC	ACTATCAAAT	CCCCATAGAC	GGTCAAAAAT	480
CTGCGTCTTA	GGCAAAATCA	CATTTTGATT	TTGAAGGAAA	TAAACTAGTA	AATCGAACTC	540
TTTCCCCAGC	AATTCGACAG	GAGTATCTTC	AACTTTAACG	GTATTGGTTG	ATAAATTAAC	600
CACGATATTC	CCATAAGTCA	AGGTGTTTTC	ATTAAACTTC	CCTGAACGTT	TGAGAAGGGC	660
CTGAATCCGC	ATTTTAAGTT	CTTCTAGGTA	GAAAGGTTTG	GTCAGATAAT	CATCCGCTCC	720
CAGTTCAAAT	CCATGTCCCT	TGTCATCCAA	ACTTTCCTTG	GCAGTCATAA	TCAGAACTGG	780
TGTCGTAATT	CCCTTTTCAC	GCAATTCTTT	TAAGACTTGG	AAACCATTTT	TTTCTGGCAA	840
CATCAAATCC	AGCAAAATCA	AGTCATAGAC	ACCACTCTCA	GCTTCGTAGA	GACCTTCTTC	900
TCCATCAAAT	ACCTGCATAA	CATCCGCAAA	ATCGTCTAAA	AAGTCAAATA	CTGAATTTGA	960
CAGACCTAGG	TCATCCTCAA	CCAATAAGAT	TTTATCATG	AGAAACTCCT	CCTTATTAAA	1020
ACTATTATAC	CAAATTTGCC	TTAAAAAAA	CTCAACTCTC	TGCATTTTAC	ATGAGATAGC	1080
TGAGTTTCT	TTTTATTTTA	GGCTTATTTA	TGCATTTCCG	TATTGAAGAA	CAACTGCTTC	1140
GACTGCAGCT	TTTTCACGGC	TAATCAAGTC	AACACGCGCT	GCAATTTCCT	TGATTCCCAT	1200
ACCGATGTTA	CGGCTAAGAG	CAAGGTCAGA	AAGTTGCGGT	TCAAAGAACT	CCTTGTATTTC	1260
CGCCAAGCGT	TGCTGAGTCT	TAAATACATG	AGCAGGAAGG	ATAACAAAGC	TATCAAAGCT	1320
CATATCTCCT	CCAAGGGCTG	CCTTAATCCA	AGCCAGTTT	TCACGCGCCC	AAGACCAAGC	1380
TGTTTTCTGA	GTTGCTTGAT	GAGCTAGGAA	TTGGTAATAC	CAAGCAGACA	AGTCCTGTGG	1440
TTTGACCACA	AATTGTCTCT	TCCAAGAAGT	AATCAGGTTT	TGGATATTAT	CCGCATCTGT	1500
ACTGTATGCA	AGAGCTGCTG	CCAACTGGCG	TTTAAAGACA	GCATCTGTTG	CGTGAGTATA	1560
AGTATCAAGA	TAAAGTGCTA	ACAAGTCTTT	AGTCTCATGA	TGTTTCATCT	CATTAATCAG	1620
AAC TTGTGAG	CGAATAGCTG	CTGGGAGTCC	TGCAAGATTC	TCCTTGTTGT	TTGCGAAGAT	1680
TTGGCTAGCG	ACTTGACTAG	CTTCTGCATC	ATTTGAGCGA	ATCATCATCG	AAACAGCCAG	1740
CTGACGAACC	AATTCATCCT	CATCTGATTC	TCCGTCTTTA	GCTTCAAAAC	CAAGACGGTC	1800
ATAGTTATGA	CGAGCCAATT	TAGCAACCAG	TCCTTTGAAG	GCTGTTTCAG	CATCCGTTCC	1860
TTTATCAATA	AAGCGCTCAA	GGGCTGAAAT	CACTTGAGAA	ACAGCTGAAA	CCACCAGATA	1920
AGACTCTTCC	TTAGCAAGTT	TATCAAGAAC	TGGAAGCAAG	TCTGCATAAG	AAATGTGCCC	1980
TGCCTCAGCC	AACAAACGAC	GTTCTTGAAC	AATTTGCAGT	TTGCTTGTGT	TATCAAGTGT	2040

633

CTCTAGCTCA GCAAGAACAG CTGCTAACAA GTCTCCTTGA TAGTCGGTAA TATAGTGGGC	2100
AGTATTTTCA GTGTTGAGAC GAAGAGCTCC TTCATTTTCA GCAAGAAGAG CTGCGTAGCC	2160
AGGGATTTCG ATACTTTCAG TTTCGAGTGT ATCAGGCAAG CCTTTCAGT TGCTATTGAG	2220
GGGCACCACC CAGAGACGGT TCTTGCTTTC GTTCTCACCG ATGAAGAATT GTTTTGTGA	2280
AATCTTCAAG ACATCATTTT CAACTTTAAC AGTAAGAACT GGGTAACCAG GCTGTTCCAA	2340
CCAAGAATCC ATGAAGGCTG CGACATCACG TCCTGACGCT TGACCAAGGG CATCCCAAAG	2400
GTCACTACCA ATGGTGTTGC TGTATTGGTG TTTTTCAAAG TAGGCGTGCA AACCTTTAGC	2460
AAAATCAGCA TCTCCTAGCC AACGGCGAAG CATGTGCATG AGACGGCTTC CTTTGGCATA	2520
GACGATAGCG CCGTCAAAGA GTGTATTGAT TTCATCTGGA TGTTTAACTT CGACGTGGAC	2580
AGACTGAACG CCATCAGTAG CGTCACGTTT AAGAGCAAGA GGTACTCCAC CTGTTTGGAA	2640
ATCTTCAAAG ATATTCCAGC TTGGTTCGAT GGTATCCACA CAGACGTATT CCATCATATT	2700
AGCGAAACTT TCATTGAGCC AAAGGTCATC CCACCATTTT ATAGTCACGA GGTTCCTAAA	2760
CCATTGGTGA GCCAATTCAT GGGCCACAAC AAGGGCAACT TGTGACGGC TAGCAAATGT	2820
AGAGTTCTCA TCGACAACCA AGTAACTTC ACGGTAGGTC ACAAGACCCC AGTTTTCAT	2880
AGCACCAGCT GAGAAGTCAG GAAGGGCGAT GTGGAGAGAT TGAGGAATTG GGTACTTAAC	2940
TCCATAGTAA TCTTCGTAAA ACTCGATAGA GCGAACAGCG ATATCCAGTG AGAAATCAAG	3000
ATTTGAAAGT GGATGTGCTT TGGTTGAGTA GACACCTACC AGGTACCAT TTTTAGTTTT	3060
AGCGGTCAAC CTTGCAAAT CACCAGCAAC AAAGGCCAAC AAGTAAGAAG ACATGCGAGG	3120
TGTTGTCTCA AACTTCCAGA TACCTGTTTC CTTACGGTTT TCAACATCGA TTTCTGGCAT	3180
GTTTGACAAG GCCAATTCAC CTTCTGCTTG GTCAAAGCGA AGAGAGAGGT CAAAAGTTGC	3240
TTTGGCTTCA GGCTCATCCA CACATGGGAA AGCTTCGCGC GCAAAATGGC TCTCGAACTG	3300
AGTAGACAAG ACCTCCTTCT TGACTCCATC AACTGTATAA TAAGAAGGGT AAATCCCTGT	3360
CATGTTGTCT GTAATTTTAC CAGAAAAGGC AAGAACCAAT TCAACTTGAC CAGCCTCAGC	3420
CAATTGCGATA TGAAGGGCTT CATTGTCATG GTCAACTGTA AATGGACGAG CTTGACCTGC	3480
AACTTCTACA GAGGTGATTT CCAAATCTTT TTGGTGGAGG GAGATGCGGT CACTCTGTGC	3540
TTGACCAGTG ATGGTCACTT TCCAGAAAA AGTCTTGGTC TCACGACTCA AATCTAAAAA	3600
TAAATCATAA TGTTCAAGAA CAAATTGCTT AATGGG	3636

(2) INFORMATION FOR SEQ ID NO: 79:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 5066 base pairs

634

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

ATAGCGTGTA ATAATCGATT TTAGAGGTAC CATAAGCCAC CTCCTACAAA TAGAAACCGA	60
TATAAATCAA TGCCTTCCAC CCTTAGACTT CCCTAGTTCC TGTCTCAAGC GAAACATTTT	120
TTTGAAACAG GAATAAGTTA ACCAATTCAT ACCAATAGCT AGCAGAATAA AAAGAAACCA	180
AATGCCCCAT AACTTGATAT CTGTCACATT TCTCAAGACG GTATTGAAAA ACAGAACTGA	240
AACAACGTG CAGCAAGGC TAAAAAGAGA ATAGAAGGGG ATGTAAAACC AGTAAAAATA	300
ATAAAAAATT GGAAAAAACT TACTATTCTT GTTGGCCTTT TCAATCCAGT TATCAAAATA	360
AAAGTACGGT GCTAAAAGTA AGAATTTAAA CAAATGTTCC ATCACCAGCA TCCCCCTTC	420
TTTTGATAGC GTTTTCTATT ATTTTATTAT ATCAAAAAA TCCGGAACGT TCATTCCAGA	480
TTCTACTTTT TTATTGCGT TTTCTTGCGA TGAGATGAAT CGGTGTTCCC TCAAAAACAA	540
AGGCCTTGCG GATTTGATTT TCCAAGAAAC GCAGGTAAGA AAAGTGATG AGTTCTTCTT	600
CATTGACAAA GATGACAAAG GTTGGTGTTT TGGTTGCCAC TTGGGTCGCA TAGAAAATCT	660
TGAGACGTTT TCCTTTGTCT GTCGGTGTG GGTGATGGC AATGGCATCC ATGATGACAT	720
CGTTCAAGAC AGCTGATGGA ATACGTGTAT TTTGACTTTC GCTGATTTGC TTAATCATCT	780
CAGGAAGTTT GTGGAGACGT TGCTTGTTA AAGCTGATC AAAGATAATC GGTGCGTAAG	840
GCAGGTATTG GAACTGCTCA CGGATATCTT CTTCCTCAGT TTTCATAGTG TGGTTATCTT	900
TTTCAAGCGT ATCCCCTTG TTGACCACGA TAATCATCCC TTTACCAGCT TCATGGGCAA	960
ATCCTGCGAT ACGCTTGTCG TACTCACGAA TGCCTTCTTC CGCATTGATG ACCATCAAGA	1020
CCACATCTGA ACGGTCAATA GCACGCATGG CACGCATAAC AGAGTATTTT TCAGTATTTT	1080
CATAAACCTT ACCAGACTTA CGCATACCAG CCGTATCAAT CATGGTAAAC TCTTGACCAT	1140
CTGTATCTGT AAAGTGGGTA TCAATGGCAT CACGAGTTGT TCCAGCAACA GGACTAGCAA	1200
TAACACGGTC TTCTCCCAAG ATAGCATTGA TCAAGCTTGA TTTTCCAACG TTAGGACGAC	1260
CAATCAAGCT AAACCTTAATG ACATCTGGAT TTTCTTCCTC ATATTCATTT GGAAGATTTT	1320
CTACGATCGC ATCTAGCACA TCCCCTGTAC CGATTCCATG GACAGATGAG ATAGGCAATG	1380
GTTCACCCAA ACCGAGAGCA TAGAAATCAT ATATATCATT TCTCATCTCA GGGTTGTCCA	1440
CCTGTGTGAC TGCGAGGATA ACTGGTTTGT GGGTCTTATA AAGCTTACGA GCTACGTATT	1500
CGTCTGCATC AGTAATTCCT TCCTTACCAG ACACGACAAA AACGATAACA TCTGCTTCTT	1560

635

CCATGGCAAT TTCTGCCTGG TGCTTGATT GTTCCATGAA AGGAGCATCG ACATCATCAA	1620
TTCTCTCCTGT ATCAATCATG CTAAAAGAAC GATTGAGCCA CTCACCCGTT GCATAAATAC	1680
GGTCACGTGT CACTCCTTCG ACATCTTCTA CAATGGAGAT TCGCTCACCA GCGATCCGAT	1740
TAAATAGGGT TGATTTCCCA ACATTGGGAC GTCCTACAAT GGCAATAGTT GGTAGGGCCA	1800
TAATTTCTCA CTTTCTACAA TAATTTCTTC TGTTCAGAT TTTTCTAGT TGAGCTTGGT	1860
TCAGCTTGAC CAAACTGTTT TGCTAGGCGC TGACTCCAGC TTGTGGTCGC ACGCGCCCCA	1920
GCATAGTCAG CCTGAACACG GTCATAAGCT TGGATTGCCT CAGTTGACTG TTCTTGGTAT	1980
TCTTCTCAA AGACAACATT CTCTAGTGGC AGTCTCGGTT TCATATCATG ATGTTGATTT	2040
GGCACACCCA GTGCCATCCC AAAGACAGAA TAGGTGTAGT CAGGTAGGTT AAAGAGCTCT	2100
GCCACTTCTT CAGACTTGTA TCGAACCAAA CCGATAATCA CACCACCATA GCCCAAGCTT	2160
TCAGCTGCCA ACAAGGCGTT TTGTCCAGCA AGAGCTGCAT CGACCGAACT AATCAAGAGA	2220
CCTTCCACAC CTTGGGGTTG GAAGGTGTCG GTATGAAGTC GGGCTCCCTT TTCTGCTCGG	2280
TTCAAATCTC CGACAAAGAG AAGGAAAACA GCAGACTGGC GAATGGCTTC TTGAGGTACC	2340
AATTCATACA AGGCATCTTT CTTCTCTTGA CTTCTGACCA CAATCACAGA GTAGGATTGG	2400
AAATCTTCC AAGATGATGC CATCTGGGCT GCTGTCAAAA TCTCATTTAA GTCTACTTGG	2460
GGAAATTTCTT GCTCTTTAAA CCTGCGCACT GAAGTATGAG CCTTCATCAA TTTAATGGTT	2520
TCTGTATCG ACGGTTTACT CCTTCTAAAC GAGTCTCCTC AGCCAAATAA CGGATGCGTT	2580
CCATGACCCG TCTGGCTTCC CAGGTTTCGT CATTTCCATG TTTCACTTTC GCAAAATGCT	2640
TCTCCAAATC TTCAAAGTTG AAGTTGGATG TGAAAAAGGT CGGTAAATTT TCCTGCATCC	2700
GATATTGGAG AATGACCTGC AGGATTTTCGT CACGCACCCA AACGGTTGAT TGCTCGGCGC	2760
CAATATCATC TAAAATCAGG ACCTCAGACA GCTTAATCTC ATCCACCAAG GTCTTAACAT	2820
TGCCATCACT GATAGCATTT TTGACATCAA TGACAAAGCT AGGATAGTGG AGGAGAGTTG	2880
ATGAAACACC ACGTTTTTCT GATAAATCAT GAGCTAAGGC CGCCACCATG AAACTTTTAC	2940
CCACACCAAA GTCTCCATAT AAGTAAAGAC CTTTTCGAAT AGCTGGATAT TGCTCCACGA	3000
AGGCTAGTAG CTTTTCAAAA ACTGGTAAGC GCCCCTAATC ATCCAAGTCA ACTTGAGCCA	3060
AACTAGCTTT CTTGAGACTG GCTGGTAGAT TGATTAAGTT GAGACGGTTC TTAATAGCCG	3120
CTTCTTTTTC AGCCGCGATT AGCTCAGGAG TTTCTTCATA TGAAACATCT GCATAACCAT	3180
GATTCTTAAC CAAAATCGGC TTGTAGCCTT TGGCAATATA ATCCGTATCC CCACGGAGAA	3240
ACTGTGCACG CTCGGTGATG TACTGATTAA ACTTGGAGAT ACTGCGATTT AATTCCTTTG	3300

636

GAGTTAAGGA TTCTTGCTGG ATAAAGGCCG CAACATCAGG GTCCTTCATG ATTTTCTGGA	3360
CCAAATCTTG ATAATAAAAA CGGCTGGGTT GACGTTTGAG TACGTCTCCG AACTTTTCCA	3420
TCTAATCTCC TCCTTTTCT AATCGAGCTA ATAGTTCTTG CTCTTACGT TCTAGTTCCA	3480
GACGAGTTTC CTCGCTGGTT TCATTCTTAT ATTCCAGGATT ACTCCATTTA GGAACATTGG	3540
TTTTTTCTGG GGCAGTCTGA TTCTGTTTTT GTGTTTTTGC TTTCTGCCCT CGATCACGAA	3600
TTCTGTA AAC GGCCTCTTCT GCCGAATGAA TCTTTTGATA GGCATAGTCA TTGGCTACCT	3660
TCATGGCATA TTTCTCATTG ATATTTGCCG AATCCACCTT ATTAAAGGTC AATAAGAGAA	3720
TAATATTGAT GACTTCGTCC AGTAAGCCCA AGCCAGCCAT CTGTTGCAAG AGTTCTCTTT	3780
CTGTTTGGGT AATGGTTCCC TTGCGTGTTT GCTTGATTTC TGCTAAGAAC TGCAGGGCAG	3840
TTTTACTTTT AGCTTCTTTG ATAATGGTCG CTTCTTAAG ACTAAAGTCA GAGGAACTG	3900
GTTTTTGAGC AATTTTTTCA CGCATGCGTT TGGTTGAAAT AACCTGGGAA ACAGCTGTGTG	3960
ACTTGCCCAA TTGATAGGTT TCAAACCAAG TCCATTTCTT CTCCTCGGCA ATAGCAAAGA	4020
GGTTTAAGAC ATCGGACTGC TCATCCGCAA AACGAAGTCC ATCTCGAGCC ATCAGCTGGC	4080
GAAAATGTTT CAAGTCAAAA TCATTGGCCA CTTTCTTCTT GAGACCAAGG TCTTCTTGAC	4140
TGCCTAGTTC TGCCAATCTT GGAAAGACTT GATTGAGTGA GACAGGTATT TCTTCACCAT	4200
CAGCACTTTC AACTTTCAAA TCCTCCACAG CTACATCGCC AATCTTTTTC TCTAAGAGTC	4260
TGCGATAAAC AGGATGCCCC AAGAAGTCTT GACTAGATAG AGGAGCATGG AGGGCTAGCT	4320
GATAAACATC ACCCTTTTGA TAGAGGTCA AGAGATTAAA AGCAGATAAG ATTTTCAATG	4380
ATTTTATCAG TCTATCCATC CCAAAGTTGA GATGGTTGAG AATGCTTGAA AAAAGATATT	4440
CCTTTCTACC ATTATCCCAA AAAGTATTG TATAAAGATA AAGGCTCAGT GCCTCCTGAC	4500
CGATAATCGG GAGGTAGCAC TGTACCAGAG ATGAGGTATC TTGCGACACC CGATTATTCT	4560
TTAGATAAGA AAAACGGTCA ATTGGCTTCA TTTATCTTTC CTTTCTCTT TTAGAGGACT	4620
GGGTGATTTG TTGGAGCAAG CTCTCTAACT CACTGACATC CTTAAACTA CGATAGACAC	4680
TAGCAAAACG TACATAGGTA ATCTCGTCCA ATTCAGCCAA CTCCTCCATG ACGAGTGAAC	4740
CAATGTCCTC ACTTTGAATT TCATTTTCAT TTCGACCACG GAGTTTCTGT TCGATACGAT	4800
TGACTACCAT GTTGATTTC TCACTTGACA CAGGACGTTT CTGGGCTGAG CGGATAATCC	4860
CATTAAAGAT TTTATCTCTG GAGAATTGTT CCCGTGTGCC ATCTTTTTTA ACAACCACTA	4920
AGGTTCTTTC TTCTACTCGT TCGTAGGTTG TAAAACGGTG TTGGCATTCTG TCGCACTCAC	4980
GTCTTCTACG AATGGTGTTT CCTTCTTCTG CTTGGCGACT ATCGATAACA CTTGACTTGG	5040
TAGCCCCACA TTTTGGACAG GGTACC	5066

637

(2) INFORMATION FOR SEQ ID NO: 80:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 9607 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

CACCTGAAGT ATTTGAAACA GCTATGGAAA ACATCATGCC TGTACTTGAA GTACGTGCAC	60
GTCGTGTTGG TGGTTCTAAC TACCAAGTCC CAGTTGAAGT TCGTCCAGAA CGTCGTACAA	120
CACCTGGACT TCGTTGGTTG GTAACAATCG CTCGTCTTCG TGGTGAACAC ACAATGCAAG	180
ACCGTCTTGC AAAAGAAATC TTGGATGCTG CTAACAACAC TGGTGCAGCA GTTAAGAAAC	240
GTGAAGATAC TCACCGTATG GCTGAAGCTA ACCCTGCATT CGCACACTTC CGTTGGTAAAG	300
ATAGGATGCG AAAGCGTTAA GAAAGTCCCA GAGAAAATAG GGAATCGAAG CAGGTTGCGG	360
TTGCAACCAA TGAGATTCAT CTTTTCTCC AGACTTTTAG CTTGAGCTCA ACTAAATCAT	420
GATGCTAGGA ACGGTAAGGA TGCAAGGTAA AAATAGGAAA CTGACGCAGT ATTGACGAA	480
TACAAGGAGT TTTATCTTTT TCACGCAGCA TCCCGTTCCA GCTCACATCG GCTAACTAAC	540
TTTAGCCCGG GTTCAAATTA GCTAAATCGA TTAGTATTAG CTATAACTCA GCTTACCATC	600
TCGTAAGTTG AAACCAACAA TAGCATGAAA ACATTGAGAA CGGGTAGGTC CTGCCTATCC	660
GTTTTTATTA AAATCGTGTT ATAATAGAAT AGAAATCAAA AATAAATAGG AGAAACAAC	720
CTCATGGCAC GCGAATTTTC ACTTGAAAAA ACTCGTAATA TCGGTATCAT GGCTCACGTC	780
GATGCCGGTA AAACAACAAC TACTGAGCGT ATTCTTTACT ACACTGGTAA AATCCACAAA	840
ATCGGTGAAA CTCACGAAGG TCGGTCACAA ATGGACTGGA TGGAGCAAGA GCAAGAACGT	900
GGTATCACGA TCACATCTGC TGCGACGACA GCTCAATGGA ACAACCACCG CGTAAACATC	960
ATCGACACAC CAGGACACGT GGACTTCACA ATCGAAGTAC AACGTTCTCT TCGTGTATTG	1020
GATGGTGCGG TTACCGTTCT TGACTCACAA TCAGGTGTTG AGCCTCAAAC TGAAACAGTT	1080
TGGCGTCAAG CAACTGAGTA CGGAGTTCCA CGTATCGTAT TTGCCAACAA AATGGACAAA	1140
ATCGGTGCTG ACTTCCTTTA CTCTGTAAGC ACACTTCACG ATCGTCTTCA AGCAAATGCA	1200
CACCCAATCC AATTGCCAAT CGGTTCTGAA GATGACTTCC GTGGTATCAT TGACTTGATC	1260
AAGATGAAAG CTGAAATCTA TACTAACGAC CTTGGTACGG ATATCCTTGA AGAAGACATC	1320
CCAGCTGAAT ACCTTGACCA AGCTCAAGAA TACCGTGAAA AATTGATTGA AGCAGTTGCT	1380

638

GAAACTGACG	AAGAATTGAT	GATGAAATAC	CTCGAAGGTG	AAGAAATCAC	TAACGAAGAA	1440
TTGAAAGCTG	GTATCCGTAA	AGCGACTATC	AACGTTGAAT	TCTTCCCAGT	ATTGTGTGGT	1500
TCAGCCTTCA	AAAACAAAGG	TGTTCAATTG	ATGCTTGATG	CGGTTATCGA	CTACCTTCCA	1560
AGCCCACTTG	ACATCCCAGC	AATCAAAGGT	ATTAACCCAG	ATACAGACGC	TGAAGAAATT	1620
CGTCCAGCAT	CTGACGAAGA	GCCATTTGCA	GCTCTGCCT	TCAAGATCAT	GACTGACCCA	1680
TTCGTAGGTC	GTTTGACATT	CTTCCGTGTT	TACTCAGGTG	TTCTTCAATC	AGGTTTATAC	1740
GTATTGAATA	CTTCTAAAGG	TAAACGTGAA	CGTATCGGAC	GTATCCTTCA	AATGCACGCT	1800
AACAGCCGTC	AAGAAATCGA	CCTGTTTAC	TCAGGTGATA	TCGCTGCTGC	CGTTGGTTTG	1860
AAAGATACTA	CAACTGGTGA	CTCATTGACA	GATGAAAAAG	CTAAAATCAT	CCTTGAGTCA	1920
ATCAACGTTT	CAGAACCAGT	TATCCAATTG	ATGGTTGAGC	CAAAATCTAA	AGCTGACCAA	1980
GACAAGATGG	GTATCGCCCT	TCAAAAATTG	GCTGAAGAAG	ATCCAACATT	CCGCGTTGAA	2040
ACAAACGTTG	AACTGGTGA	AACAGTTATC	TCAGGTATGG	GTGAACCTCA	CCTTGACGTC	2100
CTTGTGATC	GTATGCGTCG	TGAGTTCAAA	GTTGAAGCGA	ACGTAGGTGC	TCCTCAAGTA	2160
TCTTACCGTG	AAACATTCCG	CGCTTCTACT	CAAGCACGTG	GATTCTTCAA	ACGTCAGTCT	2220
GGTGGTAAAG	GTCAATTCCG	TGATGTATGG	ATTGAATTTA	CTCCAAACGA	AGAAGGTAAA	2280
GGATTGCAAT	TCGAAAACGC	AATCGTCGGT	GGTGTGGTTC	CTCGTGAATT	TATCCCAGCG	2340
GTTGAAAAAG	GTTTGGTAGA	ATCTATGGCT	AACGGTGTTC	TTGCAGGTTA	CCCAATGGTT	2400
GACGTTAAAG	CTAAGCTTTA	TGATGGTTCA	TATCACGATG	TCGACTCATC	TGAAACTGCC	2460
TTCAAGATTG	CGGCTTCACT	TTCCCTTAAA	GAAGCTGCTA	AATCAGCACA	ACCAGCTATC	2520
CTTGAACCAA	TGATGCTTGT	AACAATCACT	GTTCCAGAAG	AAAACCTTGG	TGATGTTATG	2580
GGTCACGTAA	CTGCTCGTCG	TGGACGTGTA	GATGGTATGG	AAGCACACGG	TAACAGCCAA	2640
ATCGTTCGTG	CTTACGTTCC	ACTTGCTGAA	ATGTTGCGTT	ACGCAACAGT	TCTTCGTTCT	2700
GCATCTCAAG	GACGTGGTAC	ATTGATGATG	GTATTTGACC	ACTACGAAGA	TGTACCTAAG	2760
TCAGTACAAG	AAGAAATTAT	TAAGAAAAAT	AAAGGTGAAG	ACTAATCCGT	CCTCACTCTA	2820
GAAGGAAGTC	ACTTAGTGGC	TTCTTTTGT	CTTTAGAAAA	TACCTCTAAA	TATGGTAAAA	2880
TAGTAGAAGA	ATAATGTGAG	GAAAATGAAT	GTCAAATAGT	TTTGAAATTT	TGATGAATCA	2940
ATTGGGGATG	CCTGCTGAAA	TGAGACAGGC	TCCTGCTTTA	GCACAGGCCA	ATATTGAGCG	3000
AGTTGTGGTT	CATAAAATTA	GTAAGGTATG	GGAGTTTCAT	TTCGTATTTT	CTAATATTTT	3060
ACCGATTGAA	ATCTTTTATG	AATTAAAGAA	AGGTTTGAGC	GAAGAATTTT	CTAAGACAGG	3120
CAATAAAGCT	GTTTTTGAAA	TTAAGGCTCG	GTCTCAAGAA	TTTTCAAATC	AGCTCTTGCA	3180

639

GTCCTACTAT AGGGAGGCTT TCTCTGAAGG TCCATGTGCT AGTCAAGGTT TTAAGTCCCT	3240
TTATCAAAAT TTGCAAGTTC GTGCTGAGGG TAATCAGCTA TTTATTGAAG GATCTGAAGC	3300
GATTGATAAG GAACATTTTA AGAAGAATCA TCTTCCTAAT TTAGCCAAAC AACTTGAAAA	3360
GTTTGGTTTT CCAACTTTTA ACTGTCAAGT CGAGAAGAAT GATGTCCTGA CCCAAGAGCA	3420
GGAAGAGGCC TTTCATGCTG AAAATGAGCA GATTGTTCAA GCTGCCAATG AGGAAGCGCT	3480
CCGTGCTATG GAACAACTGG AGCAGATGGC ACCTCCTCCA GCGGAAGAGA AACCAGCCTT	3540
TGATTTTCAA GCGAAAAAAG CTGCAGCTAA ACCCAAGCTG GATAAGGCGG AGATTACTCC	3600
TATGATCGAA GTGACGACAG AGGAAAATCG TCTGGTATTT GAAGGGGTTG TTTTGTATGT	3660
GGAGCAAAAA GTGACTAGAA CAGGTCGTGT TTAAATCAAC TTAAAATGA CGGACTATAC	3720
TTCAAGTTTT TCTATGCAAA AGTGGGTAA AAACGAGGAA GAGGCCCAGA AGTTTGACCT	3780
CATCAAGAAG AATTCTTGGC TCCGAGTTCG AGGGAATGTG GAGATGAATA ACTTCACACG	3840
CGATTTGACT ATGAACGTAC AGGATCTGCA GGAAGTTGTT CACTATGAGC GGAAGGATTT	3900
GATGCCAGAA GGTGAGCGTC GGGTTGAGTT TCATGCTCAT ACTAACATGT CGACTATGGA	3960
TGCTTTGCCA GAGGTCAAG AGATTGTGTC AACAGCTGCT AAGTGGGAC ACAAGGCGGT	4020
TGCTATCACG GACCATGGGA ATGTCCAGTC CTTTCCACAT GGCTATAAGG CGGCTAAGAA	4080
AGCGGGAATC CAGCTGATCT ATGGGATGGA AGCCAATATC GTGGAGGACC GTGTCCCTAT	4140
CGTCTATAAC GAAGTGGAGA TGGACTTGTC AGAAGCAACC TACGTGGTCT TTGACGTGGA	4200
AACGACGGGA CTTTCAGCTA TCTATAATGA CTTGATTCAG GTTGCGGCTT CTAAGATGTA	4260
CAAGGGGAAT GTTATTGCTG AATTGATGA ATTTATCAAT CCTGGGCATC CCTTGTGAGC	4320
CTTTACTACA GAGTTAACTG GAATTACAGA TGATCATGTC AAAAATGCCA AACCCTAGA	4380
ACAAGTTTTG CAAGAATTCC AAGAATTTG CAAGGATACG GTCCTAGTTG CCCACAATGC	4440
TACCTTTGAC GTTGGCTTTA TGAATGCTAA TTATGAGCGG CATGATCTTC CAAAGATTAG	4500
TCAGCCAGTT ATTGATACGC TGGAGTTTGC TAGAAACCTC TATCCTGAGT ATAAACGCCA	4560
TGGTTTGGGG CCTTTGACCA AGCGTTTGG TGTGGCCTTG GAACATCACC ACATGGCCAA	4620
CTACGATGCG GAAGCGACTG GTCGTCTGCT TTTCATCTTT ATCAAAGAGG TAGCAGAAAA	4680
ACATGGTGTG ACCGATTTAG CTAGACTCAA CATTGATCTA ATCAGTCCAG ATTCTTACAA	4740
AAAAGCTCGG ATCAAGCATG CGACCATCTA TGTCAAGAAT CAGGTAGGTC TAAAAAATAT	4800
CTTTAAGCTG GTTTCCTTGT CTAATACCAA GTATTTTGAA GGAGTGCCAC GGATTCCGAG	4860
AACGGTTCTA GATGCCCATC GAGAGGGCTT GATTTTAGGT TCAGCCTGTT CAGAGGGTGA	4920

640

AGTTTTTGAC GTGGTCGTTT CTCAAGGTGT GGATGCGGCG GTTGAGGTGG CCAAGTATTA	4980
TGATTTTATC GAGGTCATGC CACCGGCTAT CTATGCACCC TTGATTGCCA AAGAGCAGGT	5040
CAAGGATATG GAGGAACTCC AGACCATTAT CAAGAGTTTG ATAGAGGTTG GAGACCGCCT	5100
TGGCAAGCCT GTTCTGGCTA CGGGAAATGT TCACTATATC GAACCGGAAG AAGAGATTTA	5160
TCGTGAAATT ATCGTCCGTA GTTTGGGACA GGGTGCGATG ATTAATCGAA CTATCGGTCA	5220
TGGTGAACAT GCCCAACCAG CACCACTTCC AAAGGCTCAT TTTCGAACGA CTAATGAGAT	5280
GTTGATGAA TTTGCCTTTT TGGGAGAGGA ACTGGCTCGT AAAGTGGTTA TTGAAAACAC	5340
CAATGCCTTG GCAGAAATAT TTGAATCCGT TGAAGTCGTT AAGGGTGACT TGTATACGCC	5400
TTTCATCGAC AAGGCTGAAG AAACAGTTGC TGAGTTGACC TATAAGAAAG CTTTTGAGAT	5460
TTATGGAAAT CCGCTGCCAG ATATTGTTGA TTTGCGGATT GAAAAAGAAT TAACATCCAT	5520
ACTGGGGAAT GGATTTGCTG TGATTTATCT GGCATCGCAG ATGCTGGTGC AACGTTCTAA	5580
TGAACGGGGT TATTTGGTTG GTTCTCGTGG GTCTGTCGGA TCTAGTTTCG TTGCGACCAT	5640
GATTGGGATT ACGGAGGTCA ATCCTCTCTC TCCTCACTAT GTCTGTGGTC AGTGTCACTA	5700
CAGTGAGTTT ATCACAGATG GTTCGTACGG TTCAGGATTT GATATGCCCC ATAAGGACTG	5760
TCCAAACTGT GGTCACAAAC TCAGTAAAAA CGGACAGGAT ATTCCGTTTG AGACCTTCCT	5820
TGGTTTTGAT GGGGATAAGG TTCCTGATAT TGACTTGAAC TTCTCGGGAG AAGATCAGCC	5880
TAGCGCCAC TTGGATGTGC GTGATATCTT TGGTGAAGAA TATGCCTTCC GTGCGGGAAC	5940
GGTTGGTACG GTAGCTGCCA AGACTGCCTA TGGATTTGTC AAAGGTTACG AGCGAGATTA	6000
TGGCAAGTTT TATCGTGATG CAGAAGTAGA ACGCCTCGCT CAAGGAGCGG CGGGTGTCAA	6060
GCGGACAACA GGCCAACACC CGGGGGGAAT CGTTGTTATT CCGAACTACA TGGATGTCTA	6120
CGATTTTACG CCTGTCCAGT ATCCAGCAGA TGATGTCACG GCTGAATGGC AGACCACTCA	6180
CTTTAACTTC CACGATATCG ATGAGAACGT CCTCAAATC GATGTACTGG GACATGATGA	6240
TCCGACTATG ATTCGAAAAC TTCAGGATTT GTCTGGTATT GACCCTAATA AAATTCCTAT	6300
GGATGACGAA GGCGTGATGG CACTCTTTTC TGGGACTGAT GTGCTAGGGG TAACACCTGA	6360
ACAAATTGGA ACGCCTACGG GTATGTTGGG GATTCCAGAG TTTGGAACAA ATTTCCGTACG	6420
TGGAATGGTA GACGAAACCC ATCCGACAAC CTTTGCGGAA TTGCTTCAGC TGTCTGGTCT	6480
GTCCACGGT ACTGATGTTT GGTGCGGAA TGCTCAGGAT CTGATTAAGC AAGGAATAGC	6540
GGACCTATCG ACTGTTATCG GTTGTGCGGA CGACATCATG GTTTACCTCA TGCATGCGGG	6600
TCTGGAACCT AAGATGGCCT TTACCATTAT GGAACGGGTA CGTAAGGGTT TGTGGCTAAA	6660
GATTTTCAGAA GAGGAGAGAA ATGGCTATAT CGAAGCAATG AAGGCTAATA AGGTGCCAGA	6720

641

GTGGTATATC GAATCCTGTG GGAAAATTAA GTACATGTTT CCTAAGGCC ATGCGGCAGC	6780
CTACGTTATG ATGGCCTTGC GTGTAGCTTA CTTCAAGGTT CACCATCCTA TTTATTACTA	6840
CTGTGCTTAC TTCTCCATTC GTGCTAAGGC TTTTGATATC AAGACCATGG GTGCGGGCTT	6900
GGAGGTCATC AAGCGCAGAA TGAAGAAAT CTCTGAAAA CGGAAGAACA ATGAAGCCTC	6960
TAATGTGGAA ATCGATCTCT ATACAACCTT TGAGATTGTC AATGAGATGT GGAACGAGG	7020
TTTCAAGTTT GGTAAATTAG ATCTCTACTG TAGTCAGGCG ACAGAGTTCC TCATCGACGG	7080
GGATACCCCTT ATCCCACCAT TTGTAGCAAT GGATGGTCTG GGAGAGAACG TTGCCAAGCA	7140
ACTGGTGCGG GCGCGTGAAG AGGGAGAATT CCTCTCTAAA ACAGAACTAC GCAAGCGTGG	7200
TGGACTCTCA TCAACCTTGG TTGAAAAGAT GGATGAGATG GGTATTCTTG GAAATATGCC	7260
AGAGGATAAC CAGTTGAGTT TGTTTGATGA GTTGTTTTAA AAAATTGCTT AATAATCTAT	7320
TAAAAGAGGC TAACGTATAT CCAATAGATT TACATTAGCT TTCTTTTGTG TTTAAATAGT	7380
CTATGGAAAG AGGGTGAGAG TATGTCAAAG ATGAGTATAA GCATCCGCTT GGATAGTGAG	7440
GTTAAGGAGC AGGCCCAACA GGTGTTTAGT AATCTGGGAA TGGATATGAC AACAGCTATT	7500
AATATTTTCC TTCGTCAGGC AATTCAATAT CAGGGATTAC CTTTGTGATG TAGACTAGAC	7560
GAAAAATCGGA AGTTGCTCCA AGCGTTAAGC GATTTAGACC AAAATCGTAA TATGAGCCAG	7620
TCTTTTGAAT CAGTCTCAGA TTTGATGGAG GACTTACGTG CTTAAGATTC GTTATCATAA	7680
ACAGTTTAAA AAAGATTTTA AGTTGGCTAT GAAGCGTGGT TTGAAGGCAG AATTATTAGA	7740
AGAAGTTTGT AATTTTCTGG TTCAAGAAAA AGAACATCCT GCCAGAAATC GTGATCATTC	7800
ATTGACGGCA TCCAAGCATT TTCAAGGAGT TCGTGAATGC CATACCCAGC CAGATTGGCT	7860
TTTGCTTTAT AAAGTAGACA AGTCGGAATT GATTTTAAAT TTGCTGAGGA CAGGCAGTCA	7920
CAGTGATTTA TTTTAATCTA TTTTAAGGGG GTTCTCATGA AACTAAGAAT ATTTGCGGAA	7980
GATAAGCCGG CTAAGAAGGT ATTTGAATAT CAATTAGAAC TTGCTGATCG TACAATTCTT	8040
CTATCGACAG CACTCTTGTG AGGTGCTATT GCTTTAGCAG GAATCTTTTC TGCTTTGAAA	8100
GAAAAATAAA AATAGAAAAG AGAAAACAGA ATGGTTTAC CAAATTTTAA AGAAAATCTA	8160
GAAAAATATG CGAAATTGTT GGTGCGAAC GGAATTAACG TGCAACCTGG TCACACTTTG	8220
GCTCTCTCTA TTGATGTGGA GCAACGTGAA TTGGCACATC TAATCGTGAA AGAAGCTTAT	8280
GCCTTGGGTG CGCATGAGGT CATCGTTCAG TGGACAGATG ATGTGATTAA CCGTGAGAAA	8340
TTCTCTCATG CCCCAGTGA GCGTTTGGAC AATGTGCCAG AATACAAGAT TGCTGAGATG	8400
AACTATCTCT TGGAGAATAA GGCTAGCCGT CTGGAGTTC GTTCATCTGA TCCAGGTGCC	8460

642

TTGAACGGAG TGGACGCTGA CAAGCTTTCA GCTTCTGCTA AAGCTATGGG ACTTGCCATG	8520
AAGCCTATGC GTATCGCAAC TCAATCTAAC AAGGTTAGCT GGACTGTAGC AGCTGCAGCA	8580
GGACTTGAGT GGGCTAAGAA AGTCTTCCCA AATGCTGCGA GCGACGAAGA AGCAGTTGAT	8640
TTCTTTTGGG ACCAAATTTT CAAAACCTGC CGTGTCTACG AAGCAGATCC TGTTAAGGCT	8700
TGGGAGGAAC ATGCAGCCAT TCTCAAGAGC AAGGCCGATA TGCTTAATAA GGAGCAATTT	8760
TCAGCCCTTC ACTACACAGC GCCAGGAACA GATTTAACAC TTGGTTTGCC AAAGAACCAC	8820
GTTTGGGAAT CAGCTGGTGC TGTCAATGCA CAGGGCGAAG AATTCTTGCC AAATATGCCA	8880
ACAGAAGAGG TCTTCACAGC GCCTGACTTC CGTCGTGCAG ATGGTTATGT CACTTCTACA	8940
AAACCGCTTA GCTACAACGG AAATATCATT GAAGGCATTA AGGTGACCTT TAAGGATGGA	9000
CAAATCGTAG ATATCACTGC TGAGAAGGGT GATCAGGTTA TGAAAGACCT TGTCTTTGAA	9060
AATGCGGGTG CGCGTGCCTT GGGTGAATGT GCCTTGGTAC CAGATCCAAG TCCAATTTCT	9120
CAGTCAGGCA TTACCTTCTT TAACACCCTT TTCGATGAAA ATGCGTCAAA CCACTTGGCT	9180
ATCGGTGCAG CCTATGCGAC TAGCGTTGTT GATGGAGCGG AGATGAGCGA AGAGGAGCTT	9240
GAAGCTGCAG GGCTTAACCG TTCAGATGTT CACGTAGACT TTATGATTGG TTCTAACCAG	9300
ATGGATATCG ATGGTATTCG TGAGGATGGA ACGCGGGTAC CTCTTTTCCG TAATGGGAAT	9360
TGGGCAAATT AAGGAGATAA TATGTTAGGA AGTATGTTTCG TTGGTCTCCT AGTGGGATTT	9420
TTAGCAGGTG CTATGACCAA TCGTGGAGAG CGAATGGGAT GTTTTGGAAA AATGTTTCTC	9480
GGTTGGATCG GAGCCTTCT AGGTCACTTG CTCTTTTGAA CTGGGGGCC AGTTTATCA	9540
GGAACAGCTA TTATCCAGC GATTTTAGGA GCCATGATTG TTTTAGCTAT TTTTGGAGA	9600
CGAGGAA	9607

(2) INFORMATION FOR SEQ ID NO: 81:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14231 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

CTACAAGATA ATTCCAGCTA TAACATCCGC TATAATAGTA AGAGCGAGCT CTATGATAAG	60
GCTCATTAGT TTCACCTCCT CTCACGAACC CATAGGAACG TAATCGGTAA CCGATGACAA	120
AAATAGTATA CCACAATACA TTTAGATCAT CAAGGTCAC TAATTCTTGA AATATCAGAT	180
CTAAGAGAAA AATCTTTAAA ATCAGAAAAA CGCATAATAT CAGGTGTGCA AAAACTTGAT	240

643

ACTATGCGTT TTATTGTGGG AAGGTTTACT CCATTTTCTC CTGAAATTGA GTTTTGTCC	300
AGCCTCTGTT TTTAGGGTTG CTAAGAAAAT AATGTCATGT GGTGAATATT TGTAAATCAG	360
TCAGCAGACA GAACGATACT CTTCGAAAAT CTCTTCACAT CATGTCAGCT TCGTCTTTCC	420
GTATATATGT GACTGACTTC ATCAGTTCTA TCTACAACCT CAAAACAGTG TTTCGAGCTG	480
ACTTGATCAA TTTTCAAATC TGTACTTTGA GCAAGCTGAG ACTAGCTTCC TATTTGATTT	540
TCATTGAATA TCAGAAACCC ATTCTCCATC AAATAATTCTG ACTGCGTCTA ATAATTTTGTG	600
ATCTGGCACG GTGTCTGAAA TAAAGGTGTG GTATTTGGAG AGGGGATTAA TTTTAAAAAA	660
TCCAGTCTTG TAAAAATTAG AACTATCAAT CAGTAAGATG GTTTCATGGG CTTTGTCAAT	720
AATATTTCTT TTTGAAATAG CTTGGCTGAG AGAAGCTTCA TAAACATATT GGTCATCAAT	780
ACCTCTTGCT GAACAAAATG CTAAATCGAT ATTAAAATGA TCTAATAAAG AATTTTCCTT	840
ATCATAGTTG ACCACGGAAC AGGATTGATG TTTGACCTCG CCAGATGTGA TAAAGATTTT	900
GGAGCTATCT TTAACAGTTT CAGATAGGGT TTGTGCAGTA TGTAACCATT TTGTAAAAAT	960
AATCAAATTA TCAAGTTCAG AAAGATAGGG ACAGAGTTTC TAGACAGTAG TACTAGAATC	1020
TAGATAGATA CACATACCAG ACCGAATAAA GTCTTTAGCG AGACTAGCGA TTAGTCTTTT	1080
TTGCCTAGTA CTTTCTCCTT CACGTATTTG ATGAGAAAGT TCAATTGTGT TCATAGAGGA	1140
CAGGGTCACG TATCCGTGCT TTCTTTTGAT AAGACCTTGA TTTTCTAAGA AAATTAAATC	1200
ACGACGTAAG GTACTTGTGC TGGAGAAAGT GATTTCTGCC AGCTCTTTTA CGGCAATTCT	1260
TTTTTTCTTT TTGATAATTT CAATCAATTC AAGTACACGT TCATCTTTTA TCATAAGCTC	1320
CTCCTAATTT ATCATTTCAA CTATATTATA GCACAAATTG GAGGAATTTG AATTATTTTT	1380
ATGAATATTG GGTTAACATT TGAACATTAT TCAAGTAAGC GTTCACATAT TGAAAAAATA	1440
AAACGTGGGG ATTATAATAA AGTTAATCmA GGACGAAGAG AGAAGAAAAA TGGAAGCGGT	1500
TTTAGCAATA GATTTAGGTG CGACTTCTGG AAGAGCAATC GTTGGTTACC TTTCTGAAAA	1560
TAAACTAGTA ATGGAAGAAA TAAATCGCTT TTCTAATCTA CCTATTAGAG TAAAGGGCA	1620
TTTATCTTGG GATATTGACT TTCTACTAGC TAAAATCTT GAAAGTATCC GCTTGGCTAA	1680
TACTAGTTAC AAGATTTTAT CTATCGGTAT TGACACATGG GGAGTTGATT TTGGACTGAT	1740
TGATAATGAA GGTAAGCTGT TATTACAACC TGTCATTAT CGTGATGAAA GAACAAAGGG	1800
AGTGTTAAAG GAAATATCTG AAATGACTGA ATTAGAAAAA CTGTATTCAG AGACAGGAAA	1860
TCAGATTATG GAGATAAATA CCTTGTTCCTA ACTCTTTAAG GCACGTCAAG AATCTCTGTA	1920
CTCTTTCTAT AAGACCAATA AGATTCTTTT AATGCCAGAT TTGTTTAATT ATCTCTTGAC	1980

644

AGGTAAGTTT GCTACAGAAA AAAGCATTGC TTCAACAACCT CAATTATTTG ATCCTAGGAG	2040
TCAAAATTGG AATCAGAATA TCTTAAACT ATTTGAATTG GATTCATCTT TACTTCCTGA	2100
AATTGTTTCA GAGGGAATG TTCTTGAAG GATAAAAGAG GAGTATGGTT TAGGCGATAT	2160
TCCTGTTGTG AATGTTTGTG GTCATGATAC AGCAAGCGCG ATTGTCTCAG TACCTAAGAC	2220
AGAAGGTAGT TTATTTATTT CATCAGGTAC TTGGTCTTTG GTTGGAGTGG AACTTACTTC	2280
ACCGATTCTT ACTACCGAAT CCTTCAGTTA TGGATTTACA AATGAAGTCG GTAAAGATGG	2340
AGTGATTACA TTTCTGAAGA ATTTGTACAGG GTTGTGGATC ATAGAGGAAC TAAGACGTTT	2400
ATTTGAACGA AGAGGGAAG CCTATCTCTT TGATGATATT AGGACAATGG TGGAGAAAGA	2460
AAAAGAAAT CTTCCTCTGA TTGATACTGA ATCAACTGAA TTTGCAACAG AATCTGATAT	2520
GCACAAGACT TTGACAGAAT ATCTAGCTTA TCATCATGAA ACTAGAGACT GGACAGATGG	2580
ACAACTATTT AAGATTGTTT ATGAAAGCCT AGCTGAAACG TATAGGAAAG CGATAGAGTT	2640
ACTAGAAGAA CTAATCATA AGGTTTATAA GAGGATATAT GTGATTGGAG GAGGTGCTAG	2700
AGCCAGTTAC TTTAACCAAA TGATTGCTGA TAGAACTGGT AAAGAGGTC TTACAGGTTT	2760
GACTGAGGCT ACAGCTGTGG GGAATATTGT TGTGCAGCTC ATAGCTATGG GACAATTAAA	2820
AGGGATGGAA GAGGCTCACC ATGTTATTGA GGAGTTTCTA CAATTAGAGA GTTATTACTC	2880
CCAAAAGAAT TAAAAGATT GAGAGTTTGT AAATTTGCCT CCCTCCCCCT TCTTAGCTTT	2940
TGTGCAGGAA GGGGGGATAA TTGGTGAATT GAAAAATATT TAGTGTTTTG ATATGAGGAG	3000
GACAAGGATG TCAGATGTAA AACAAGAATT AATTAAATAT GGTAAAGC TAGTAGAAAC	3060
AGATTTGACG AAAGGAACAG GTGGGAATCT CAGCGTTTTC GATCGTGAAA AACAATTGAT	3120
GGCAATTACC CCGTCGGGTA TTGATTCTT TGAAATCAAA GAATCCGATA TTGTAGTGAT	3180
GGATATTAAT GGAAATGTTG TAGAGGGAGA ACGCTTGCCA TCTAGCGAAT GGTATATGCA	3240
TTTGATTCAA TATCAAACTC GTGATGATAT CGATGCAATT ATCCATGCTC ATACAACTTA	3300
TGCAACAGTA TTAGCTTGTC TCAGAGAACC ACTTCCAGCG AGTCATTATA TGATTGCAGT	3360
GGCAGGGAAT GATGTTTCGGG TAGCTGAGTA TGCAACATAT GGCACGAAAG AATTGGCTGT	3420
GAATGCAGCT AAAGCAATGG AAGGTCGTAG AGCAGTTTTA CTAGCGAATC ATGGAATTTT	3480
AGCAGGTGCA CAAAATTTAT TGAATGCATT TAATATTGTT GAAGAAGTTG AATATTGTGC	3540
AAAAATTTAT TGTTTAGCTA AGAATTTTGG AGAGCCAGTA GTTCTTCTG ATGAGGAGAT	3600
GGAATTGATG GCAGAAAAAT TTAACACATA CGGTCAGAGA AAATAGGGAG GATATTAATG	3660
TTAAACATA TACCGAAAAA TATTTCTCCA GATTTATTGA AGACTTTAAT GGAAATGGGA	3720
CATGGAGATG AAATAGTATT AGCTGACGCG AATTATCCTT CTGCCTCATG TGCAATAAG	3780

645

CTAATTCGTT GTGATGGTGT AAATATTCCA GAATTATTAG ATTCCATTCT GTATTTAATG	3840
CCATTAGATA GTTACGTCGA TAGTTCAATT CAGTTTATGA ACGTTGTTTC GGGTGATGAT	3900
ATTCCCTAAGA TATGGGGTAC CTATAGACAG ATGATTGAAG GTCATGGTAC AGATCTTAAA	3960
ACGATTACTT ATCTTAGAAG AGAAGACTTT TATGAACGTA GTAAGAAAGC TTATGCTATT	4020
GTTGCTACAG GAGAACTTC ACTTTATGCT AATATTATCC TTAAGAAAGG AGTAGTTGTT	4080
GAAAGAGAAA ATGTTCAATA GAGGAATTTT AGTTGCCAGT CATGGTAATT TTGCTAGCGG	4140
AGCTCTCATG ACCGCAGAAA TGTGTGTTGG TGAGACAACA AATGATAGAG TTAGGACATT	4200
AGGTTTGATG CCTGGAGAGA ATATTGTAGA GTTTGAGCAT TATTTTAAAA ATCAAGTGGA	4260
TGAACTGTTA GACTCAAATC AAGAGGTTAT CGTTTGGACT GACTTGATTG GAGGAAGTCC	4320
TAATAATGTG GCTTTGTCAC GGTTTTAAAA TTTGGATTCA GTTGATATTG TAACAGGGTT	4380
TAATATCCCT CTCCTAGTGG AATTAATATC AAGTTATGAT TCAAAAATCA ATTTAGAAGA	4440
AATGTGTCAC AATGCTCAAA ATAGTTTGTT TAATGTTAAA CAACAACTTA ACGTAGAGGA	4500
GGAAGAAGAT TTATGTCTAT AGAGTTTGTT CGTATTGATG ACCGTCTGGT ACATGGTCAA	4560
GTTGTCACTA CGTGGCTAAA AAAGTATGAT ATTGAGCAAG TTATCATTGT TAATGATCGC	4620
ATCTCAGAAG ATAAACACG ACAATCTATT TTAAAGATT CTGCACCGGT AGGTTTAAAA	4680
ATTGTTTTCT TTAGTGTAAG ACGGTTTGTG GAAGTTTAA ACTCTGTGCC AATAAAAAAG	4740
AGAACAATGC TGATATATAC AAATCCAAAA GATGTGTATG ATTCTATTGA AGGAAATTTA	4800
AAATTGGAGT ACCTCAATGT AGGACAGATG AGTAAACGG AGGAAAATGA AAAGGTAACG	4860
GGAGGTGTAG CTCTAGGTGA AGAAGACAAA TATTATTTTA AGAAAATAGT TGATAAGGGA	4920
ACGAGAGTTG AAATTCAAAT GGTTCCTAAT GATAAAGTTA CAATGTTGGA AAAATTTTTA	4980
TAAAAATAAT TTAAGGAGGT ACAGTATATG CTATTCACAC AAGCATTACT GGTGACATTA	5040
GTTGGGATTA TTGCCACTAT TGAATAAAT GGACCGTTAT TTATGATTCA CCGTCCGTTA	5100
GTTACAAGTG CAATGGTTGG CTTAGTATTA GGAGATTTC CCAAGGTGT TCTTATTGGT	5160
TCAGCTCTTG AATTAACTTG GCTCGGTGTA ACAGGTATTG GAGGTATAT TCCACCAGAT	5220
ACTATTTTCA GTGCGATTAT TGGTACTGCA TTTGGTATTT TATCTGGTCA AGGAGAAACT	5280
GCTGGTATCG CTATAGCAGT TCCAATTGCA GTTGCTACCC AACAGTTGGA TGTCTTGCA	5340
AAAACCTTAG ATGTTTATTT TGTGAAAAA GCTGATAATG ATGCTAAAA CGGAGATTAT	5400
TCAAAGATCG GTTTTATCA TTATTCAGT TTGGTTTAA TCACGTTATT TAAAATTGTA	5460
CCAATTTTCC TAGCTATTAT GCTGGAGGG GAATATGTGG CAGACTTGTT TGCTAAGGTT	5520

646

CCACCAATCG TTATGCAGGG ACTTAACTCT GCAGGTGCTT TACTACCTTC AATTGGTTTT	5580
GGTATGCTTT TAAATATGAT GCTCAAGAAA AATATGTGGG TATTCCTGTT GATTGGATTTC	5640
ATTTGTCTCG TGTATGGAGG AATGTCAACC ATTGGGATCT CACTAGTTGG TATTGCGGTA	5700
GCATACTTCT ACGATATGAT TGAAGCAAA CCACAAGAAA CAACTTCAAG TAGTGATGTT	5760
GAGGAGGATC TTGATCTATG ATGAATAATA AAGTAACTAA AGTTGAACTT AAAAAAGTTT	5820
TCAAACGAAG TTTTATGTAT GGTCTTCAT GGAACATGA GAGAATGCAG AACCTAGGTT	5880
TTCTATATAC AATTCCTCCA GTATTGAAAA AACTATACCC AGACAAAGAT TCAGCTTCTC	5940
CTGCAATGAA ACGTCACCTT GAGTTTTTCA ATACTCATCA AACAGCGGCA CCATTTATTC	6000
TTGGAGTTAC TTCCGCTATG GAAGAACAAG AAGGAAATGA AGGTGCAGCT TCAATTACTG	6060
GTATTAAAGT TGGCTTGATG GGGCCACTGG CTGGTCTAGG AGATAGTTTG TTCTGGCTGA	6120
CACTAGTTCC TATCTGTTTT AGTATTGGTG CGTCTTATTC TAAAGACGGC GGTGCTTTAG	6180
GTATCTTTAT CGCCTTAATA TTGTTTAATA TTATTAATAT TCCTGTAAA TATTTCCGTT	6240
TGAAATATGG GTATACTAAG GGTCTAGTC TTATCCAAGA AAATAATACA AAAGGAACAT	6300
TGAATCGCGT TACGAGTATG GCGACAGCAT TAGGGCTAGT ACTAGTGGGT GGTTCGATTC	6360
CATCAATGGT TGGTATTAAT TTTGGATTAG AATTTAAGCA GGGGGAACCT GTTATTTCTG	6420
TTCAAGAAAT GATTACAAAA TTAATCCAG GATTTATCCC TATGGCTTTG ACTTTATTAA	6480
TGTGTAAAT AATTAGAAAA GGAAGAATC CGGTGTACT AATCTTAGT GTTATGGCTA	6540
TTGGAGTTAT TCTAGTTGTT TTAGGAATTT TGAAGTAGTA GAAAGTGTG AGGTGGTATT	6600
TGGGATATCA CCTCCATTTT GGAAGAGAGG TAAAGAGTGA AATTATGGTA TAAGAAAGCT	6660
GCCGCAAATT GGAATGAAGC CTTGCCGATT GGAACGGTC ATTTAGGTGG TATGATTTAT	6720
GGTTCAGCTA CAAAAGAATG TATTCAACTA AACGATGAGA CTATTTGGTA TAGAGGAAAG	6780
TCAGATAGAA ATAATCCAGA CTCACTATTG CATCTTAAAA AAATTCGGA ATATCTTTTA	6840
GATGGAGAAA TTCAGAAAGC CGAAGAATTG ATAAAGTTAA CAGTGTTTGC TACCCCAAGA	6900
GATCAAAGCC ACTATGAATT ACTTGGGGAA CTTTACATTG AGCATATAGA TATTCAGTCT	6960
TGTGCTCTTT CATTGTATGA AAGAGAGCTA GATTTAGATA CAGCTATTTT TAATGTTGTG	7020
TTTGAGCCTA ATAGTTGTAA TTTACAAATA AAAAGAGAAT ATTTTACGAG TTTTAATAAG	7080
AATATTTTAT GTTGCCGTAT AGTGTCATCA GTTCAAAACA CATTAATTTT AAACATTAAT	7140
TTGGGTAGAA ATAAACGGTT TAATGACGAA GTATCTAAAC TGGATTCAAG TACAATTTTA	7200
ATGTCGGCCT CTGCTGGAGG TAGAAAAGGT GTTCAGTTTA AAGTAGTAGT TCATCTAAG	7260
GTTACGGATG GTGAAGTAAG TGTATTGGGA GAGACAATAG TTATTCGGAA TGCTACAGAG	7320

647

GTATTTCTTT ATCTCAAATC AATGACGGAT TATTGGGGAA ATATAGATAT TTCTTCTCTT	7380
CAGGGAGAAT TTAGTAGTAT TGATTACTTT ACAGAAAAAG ATGAACATGT AAAAAAATAT	7440
CAGGAGCAAT TTAATAGAGT TGATTTTAAA CTAGACTATA GTAAAGGTTG TCTTAGCATT	7500
CCAACGAATC TACTTCTTGA AAACACTAAA AAGTATAGTA ACTACTTGAC TAACTTGTTA	7560
TTTCATTATG GAAGATATCT GTTAATATCG TCTAGTCAAC CGAATGGTTT ACCTGCCAAT	7620
CTTCAAGGAA TATGGTGTGA TGAATTAAAT CCAATTTGGG GTTCTAAATA TACGATTAAT	7680
ATTAATACTC AAATGAATTA TTGGATGGTA GGTCCATGTG ATTTACCAGA AGTAGAATAT	7740
CCATTATTTG ATATGCTCGA AAGAATGAGA GAACCGGGAA GACTAACCGC TAAGAAAATG	7800
TATGGAGCTA GAGGTTTTAC AGCACATCAT AATACGGATG GTTTTGGCGA TACGGCTCCC	7860
CAATCTCATG CCATGGGGGC TGCAATTTGG GTATTAAC TAATCCATGGTT ATGTACTCAT	7920
ATTTGGGAAC ACTATTTATA TTTCCAAGAT GAGCGTATTC TTACGGAACA TTTTGAAATG	7980
ATAAAAGAAG CATTTCTTTT CTTTGAAGAT TATTTATTTG AGGTGGATGG CTACTTGATG	8040
ACAGGTCCAA GTGTCTCACC GGAAAATAAA TATCGCTTAA AAAATGGTAT TGAAGGAAAT	8100
GCTTGTCTAT CATCTACAAT TGATAATCAA ATTCTAAGAT ATTTTGTGTA TTCATGCATT	8160
GGCATTGCAA AACAATTAGG AGACAATTCG GATTTTATTA GTCGTGTGAA GGAGTTAAAA	8220
AAGAACTAC CTAAAACAAA AATAGGTAGT AATGGGCAAA TCCAAGAATG GTTAGAAGAT	8280
TATGAAGAAG TAGAGCCTGG GCATAGACAC ATTTACCTC TATTTGGGCT TTATCCTTAT	8340
AATGAGATTG ATATTCATAA AACTCCGAA TTAGCAGAAG CAGCTAAAAT CACTATCAAT	8400
AGGAGATTAT CAAACGCTAA TTTTATATCT TCACAGGAGA GGGAGCAAGC GATTAATAAT	8460
TGGTTAGTAA GTGGTTTGCA TGCTAGTACA CAAACAGGTT GGAGTGCTGC ATGGCTGATT	8520
CATTTTTTTG CGAGACTATA TCAAGGTGAA CCTGCTTATA ACCAGATTAA TGGTTGTTA	8580
AATAATGCGA CTCTGGCAA TTTATTTCTT GACCATCCAC CATTTCAAAT TGATGGTAAT	8640
TTAGGTTTGG TGAGTGGAAT TTGTGAATTA TTAGTACAGA GCCATCATAA TTGGTTATCA	8700
CTAATTCCAG CTTTACCTTC TGCTTGGTCA GAAGGAGAAG TGAAAGGTTT CAGAGTAAGA	8760
GGAGGATATA AGGTATCGTT TGCTTGGAAA AATGGGGATA TAACATTCCT AAAATTGGAA	8820
GGAGGAAACA AAGATCAAAA AGTAAGAGTA AGAATATATG GCAAAAATAC TGATGTACAA	8880
AATATTGAAT TGGTATTTAA TTCAGAAAAA ATTATTGAGT TAAATTTTA GGTATAAGTC	8940
ATGAATAAAG AAAAAATAAA AAGAAAAATTA ATCACAATAT TGTTTGTATG TATTGGGATG	9000
TTATGTTTTG GATTGTTAGC AGGAGTTAAG GCTGATAATC GTGTTCAAAT GAGAACGACC	9060

648

ATTAATAATG AATCGCCATT GTTGCTTTCT CCGTTGTATG GCAATGATAA TGGTAACGGA	9120
TTATGGTGGG GGAACACATT GAAGGGAGCA TGGGAAGCTA TTCCTGAAGA TGTAAGGCCA	9180
TATGCAGCGA TTGAACCTCA TCCTGCAAAA GTCTGTAAAC CAACAAGTTG TATTCCACGA	9240
GATACGAAAG AATTGAGAGA ATGGTATGTC AAGATGTTGG AGGAAGCTCA AAGTCTAAAC	9300
ATTCCAGTTT TCTTGTTAT TATGTCGGCT GGAGAGCGTA ATACAGTTCC TCCAGAGTGG	9360
TTAGATGAAC AATTCCAAAA GTATAGTGTG TTAAAAGGTG TTTTAAATAT TGAGAATTAT	9420
TGGATTTACA ATAACCAGTT AGCTCCGCAT AGTGCTAAAT ATTTGGAAGT TTGTGCCAAA	9480
TATGGAGCGC ATTTTATCTG GCATGATCAT GAAAAATGGT TCTGGGAAAC TATTATGAAT	9540
GATCCGACAT TCTTTGAAGC GAGTCAAAAA TATCATAAAA ATTTGGTGTG GGCAACTAAA	9600
AATACGCCAA TAAGAGATGA TGCGGGTACA GATTCTATCG TTAGTGGATT TTGGTTGAGT	9660
GGCTTATGTG ATAACTGGGG CTCATCAACA GATACATGGA AATGGTGGGA AAAACATTAT	9720
ACAAACACAT TTGAAACTGG AAGAGCTAGG GATATGAGAT CCTATGCATC GGAACCAGAA	9780
TCAATGATTG CTATGGAAAT GATGAATGTA TATACTGGGG GAGGCACAGT TTATAATTTC	9840
GAATGTGCCG CGTATACATT TATGACAAAT GATGTACCAA CTCCAGCATT TACTAAAGGT	9900
ATTATTCTTT TCTTTAGACA TGCTATACAA AATCCAGCTC CAAGTAAGGA AGAAGTTGTA	9960
AATAGAACAA AAGCTGTATT TTGGAATGGA GAAGTAGGA TTAGTTCATT AAACGGATTT	10020
TATCAAGGAC TTTATTCGAA TGATGAAACA ATGCCCTTAT ATAATAATGG GAGATATCAT	10080
ATTCTTCCTG TAATACATGA GAAAATTGAT AAGGAAAAGA TTTCATCTAT ATTCCCTAAT	10140
GCAAAAATTT TGACTAAAAA TAGTGAGGAA TTGTCTAGTA AAGTCAACTA TTTAAACTCG	10200
CTTTATCCAA AACTTTATGA AGGAGATGGG TATGCTCAGC GTGTAGGTAA TTCCTGGTAT	10260
ATTTATAATA GTAATGCTAA TATCAATAAA AATCAGCAAG TAATGTTGCC TATGTATACT	10320
AATAATACAA AGTCGTTATC GTTAGATTTG ACGCCACATA CTTACGCTGT TGTTAAAGAA	10380
AATCCAAATA ATTTACATAT TTTATTGAAT AATTACAGGA CAGATAAGAC AGCTATGTGG	10440
GCATTATCAG GAAATTTTGA TGCATCAAAA AGTTGGAAGA AAGAAGAATT AGAGTTAGCG	10500
AACTGGATAA GCAAAAATTA TTCCATCAAT CCTGTAGATA ATGACTTTAG GACAACAACA	10560
CTTACATTAA AAGGGCATAC TGGTCATAAA CCTCAGATAA ATATAAGTGG CGATAAAAAAT	10620
CATTATACTT ATACAGAAAA TTGGGATGAG AATACCCATG TTTATACCAT TACGGTTAAT	10680
CATAATGGAA TGGTAGAGAT GTCTATAAAT ACTGAGGGGA CAGGTCCAGT CTCTTTCCCA	10740
ACACCAGATA AATTTAATGA TGTAATTTG AATATAGCAT ATGCAAAACC AACAACACAA	10800
AGTTCTGTAG ATTACAATGG AGACCCTAAT AGAGCTGTGG ATGGTAACAG AAATGGTAAT	10860

649

TTTAACTCTG GTTCGGTAAC ACACACTAGG GCAGATAATC CCTCTTGGTG GGAAGTCGAT	10920
TTGAAAAAAA TGGATAAAGT TGGGCTTGTT AAAATTTATA ATCGCACAGA TGCTGAGACT	10980
CAACGTCTAT CTAATTTTGA TGTGATTCTA TATGACAATA ATAGAAACGA AGTTGCTAAG	11040
AAACATGTTA ATAATTTGTC GGGTGAATCT GTTAGTCTAG ATTTCAAAGA AAAAGGAGCA	11100
AGGTATATTA AAGTTAAATT ACTAACGAGT GGAGTGCCTT TGAGTTTAGC AGAAGTAGAG	11160
GTTTTTAGAG AATCAGATGG TAAGCAATCT GAAGAGGATA TAGATAAAAT AACAGAAGAT	11220
AAAGTAGTCT CTACAAATAA GGTAGTCTACT CAAAGTTCAA CCAATTATGA GGGTGTAGCT	11280
GCTTTAGCAG TTGATGGTAA TAAAGATGGA GATTACGGAC ATCATTCCGT GACTCATACT	11340
AAGGCAGATT CTAACGCTTG GTGGCAGGTC GATCTGGGAG AAGAGTTTAC GGTTCCTAAA	11400
GTGATATTT ATAATAGAAC AGATGCCGAA CCTCAGCGTT TATCTAATTT TGATGTTATT	11460
TTTCTATCTT CATCAGGAGA AGAAGTTTTT AGAAGACATT TTGATAAAGT AGTTGATGGT	11520
TTGTTATCTT TAAAAGTACC TTCTGTAGGG GCTAAGCTAG TCAAAATAGA ATTAAAATCA	11580
GCAGCTATTC CGTTAAGTTT AGCGGAAGTT GAAGTCTATG GTTCAAAGAG AACTCCGAAG	11640
AACTTTCTA ATATTGCATT AACAAAAGAA ACTCGACAGA GTTCAACGGA TTACAATGGT	11700
TTTTCTCGTC TAGCAGTTGA TGGAAATAAA AACGGAGATT ATGGTCATCA TTCAGTGACT	11760
CATACCAAAG AAGATTCTCC TTCATGGTGG GAGATAGATT TAGCACAAAC CGAAGAATTA	11820
GAAAAGTTAA TTATTTATAA TAGAACAGAT GCTGAAATTC AGAGATTATC AAATTTTGAT	11880
ATTATTATAT ATGATTCAAA TGATTATGAA GTTTTACAC AACATATTGA CAGTTTAGAA	11940
AGCAATAATC TATCCATAGA CTTAAAAGGA CTGAAGGGAA AAAAGGTTAG AATTTCTTTG	12000
AGAAGCGCAG GAATTCCTTT AAGTTTAGCA GAGGTAGAGG TTTATACTTA TAAGTAATTT	12060
TAAAAATTAT CACCCAGGCT ACCGTAAATA TAATGGAGAT GGTAGTATGA AAGAAACAGA	12120
AAAATAAGAG GAAAATAGTA TGATTCAACA TCCACGTATT GGGATTCTGC CGACTATTGA	12180
TGGTCGTCGT CAAGGTGTAC GCGAATCACT TGAAGTGCAA ACAATGAACA TGGCTAAAAG	12240
TGTGGCAGAT TTGATTTCAA GCACATTGAA ATATCCAGAT GGGGAACCTG TGGAATGCGT	12300
GATTTCTCCA TCTACTATTG GCCGTGTACC AGAGGCTGCA GCTTCCCATG AGTTGTTTAA	12360
AAAATCAAAT GTTTGCGCAA CAATTACAGT TACACCATGC TGGTGTTATG GTAGTGAAAC	12420
TATGGATATG TCTCCAGATA TTCCTCATGC TATTTGGGGA TTTAATGGGA CAGAACGCCC	12480
AGGAGCTGTC TATCTTGCAG CTGTACTAGC TTCACATGCT CAAAAAGGGA TTCCAGCCTT	12540
TGGGATTTAT GGAAGAGATG TTCAGGAAGC TAGTGACACA GATATTCCAG AAGATGTCAA	12600

650

AGAAAACTT TTACGCTATG CGCGTGCAGC TCTTGCAACT GGCTTGATGA GAGACACTGC	12660
TTACCTATCA ATGGGTAGTG TTTCGATGGG GATTGGTGGT TCTATTGTAA ATCCGGATTT	12720
CTTCCAAGAA TACTTAGGAA TGCGAAATGA ATCGGTAGAT ATGACGGAGT TCACGCGCCG	12780
TATGGACCGT GGTATTACG ACCCTGAAGA GTTCGAACGT GCGCTCAAAT GGGTGAAAGA	12840
AAACGTAAAA GAAGGATTCG ACCATAACCG TGAAGACCTT GTTTTAAGCC GTGAAGAAAA	12900
AGATAGACAA TGGGAATTTG TTATTAAGAT GTTCATGATT GGACGTGACT TAATGGTTGG	12960
TAACCCAAGA CTGCTGAAC TTGGTTTGA GGAAGAAGCG GTTGGTCACC ATGCTTTAGT	13020
AGCTGGTTTC CAAGGTCAAC GTCAGTGGAC AGACCATTTT CCAAATGGGG ACTTTATGGA	13080
AACTTTCCTC AATACTCAGT TTGACTGGAA TGGTATTCGA AAACCATTTG TATTTGCGAC	13140
AGAGAATGAT TCACTAAATG GTGTGTCTAT GCTCTTTAAT TATCTATTAA CAAATACTCC	13200
ACAAATCTTT GCTGATGTGC GTACTTATTG GAGCCCAGAG GCTGTTAAAC GTGTAACGGG	13260
ACATACTTTA GAGGTCGTG CTGCAGCTGG CTTCTTACAT CTAATCAACT CTGGTTCTTG	13320
TACATTGGAT GGTACAGTTC AAGCTACTCG AGATGGCAAA CCTATTATGA AACCATTTCTG	13380
GGAGTTGGAA GAAAGTGAAG TGCAGGCTAT GCTTGAAAAT ACAGACTTCC CACCAGCAAA	13440
CCGCGAATAC TTCCGTGGAG GAGGATTCTC AACTCGTTTC TTGACGAAGG GGGATATGCC	13500
AGTAACAATG GTACGTCTCA ATCTTCTAAA AGGGGTGGT CCAGTGCTAC AAATTGCAGA	13560
AGGTACACA CTTGAACCTC CTGAAGATGT TCACCATACT TTAGATAATC GTACAGATCC	13620
AGGATGGCCA ACTACTTGGT TTGCTCCACG TTTGACAGGA AAAGGTGCTT TCAAGTCTGT	13680
CTATGACGTC ATGAATAATT GGGGAGCTAA TCACGGAGCC ATAACATATG GACACATTGG	13740
AGCAGACTTG ATTACCTTGG CTTCTATGTT GAGAATTCCT GTCAATATGC ATAATGTACC	13800
TGAGGAAGAT ATCTTTAGAC CTAAAAATG GTCCTTATTT GGAACAGAAG ATCTAGAATC	13860
AGCAGACTAT CGTGCATGTC AGTTGTTGGG GCCACTACAT AAATAAACT TGTTTATATA	13920
GGAGGTGAAC TTACGTCCCT CCTATCCTTT TAAAAAGATT TGTAAACAA TTCACAAATA	13980
ATTGAAAACG AATACAAAAA GTAATATAAT GATGTTAAAT AGATAGCGCG GAGGCGCAGG	14040
AGGAAAATTA TATGGCTATA TTTTATGTTT CGGCAGTCAA CCTTATTGGA AAAGGTGTTG	14100
TAAATGAAGT GGGTCCTTAT ATCAAGGAAC TTGGCTATAA AAAGGCACTT TTGGTGACAG	14160
ATAAGTACAT CGAAGGCAGT GATATTTTAC CTAAGACTTT AAAACCACTG GATACAGAAG	14220
GAATCGAATA T	14231

(2) INFORMATION FOR SEQ ID NO: 82:

(i) SEQUENCE CHARACTERISTICS:

651

(A) LENGTH: 16995 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

AGTTCTCTTA ACTTTTTTAG GATGGCATTC TCCGCTCTCA GGTACTCATT TTCTGCTgAA	60
GACGTTCTAA TTCTGTCCCTC TCTTCAGGTC TCGTTTTTGG CTTACGTCCC ATTTTAGGTA	120
CTCTCCCTCT TGTTTTCTCA ACAATAGTAT ACCCGTTTTT CCTGTATTGT GCTAGCCAGT	180
TAAGAAGTAT CGTACGACTT GGGAGACCGT ATTCAAGAGA AACTCTATCT TTAGTCCAGC	240
CTTCATGTCA GACTTTATTA CTCATTTCTT GTTTTAAATC AGGAGAATAG TAACGATTTT	300
TTCCCTTTTTT GACGAACTCT ATTCCGTAAC GATCAATCAA TTTAATCATG TACCTAATAT	360
TAGAATGCT TATCCCAAAT TTATTTGAAA GCTTCTCTAA GCTATATCCT TGTTTTCTAA	420
GTTCATAGAT CTGAACCTTA TCATCATAAG TTAGTTTCAT AATAAAAACA CCCCAAAGT	480
TAGATTTTTT CTGTCTAACT TTTGGGGTGT AGTTCATGTA CACCTGATAT GATGCGTTTT	540
ATAATTTTTA AGCCTTTTTG CCCAGCCTCG TCAAAAGTAA TGTTTTGACA CAAATCTGT	600
GACAAAACCT TAGTTTTAAA GGTTTTTAAC TTTGTATATA CTAGTTTTAA GAAAAGGAGG	660
ATGATCTAAT GGAAGAAAAA GTATCATTGA AAGTCAGGGT TCAAAAAC TA GGGACATCGC	720
TTTCAAATAT GGTATGCCC AATATTGGAG CATTTATTGC TTGGGGAGTA TTGACTGCCC	780
TCTTTATCGC TGATGGCTAT CTGCCAAATG AACAGTTAGC TACTGTGTGT GGTCTATGT	840
TAACGTATTT ATTGCCAATC CTGATTGGTT ACACAGGTGG ATATATGATC CATGGCCAAC	900
GTGGTGCCGT TGTAGGAGCT ATTGCTACTG TTGGTGCAAT CACAGGTTCT AGTGTTCCTA	960
TGTTTTATCGG AGCTATGGTA ATGGGCCCAC TGGGAGGATG GACTATCAAG AAATTTGATG	1020
AGAAGTTCCA GGAATAAATT CGTCCCGGAT TTGAAATGTT AGTTAATAAC TTCTCAGCTG	1080
GTCTCGTTGG TTTTGCAATTA TTGCTTTTGG CTTTCTACGC AATCGGTCCA GTCGTATCGA	1140
CTCTTACTGG AGCTGTGGG AATGGTGTG AGGCTATTGT CAATGCTCGC CTCCTTCCTA	1200
TGGCTAATAT TATCATCGAA CCGGCTAAAG TCCTTTTCCT CAATAATGCC CTCAATCATG	1260
GCATTTTTAC TCCTCTGGGA GTAGAACAGG TAGCTCAAGC TGGTAAGTCA ATTCTCTTCC	1320
TATTGGAAGC TAATCCTGGA CCAGGTCTGG GAATCTATT AGCTTATGCT GTATTCGTA	1380
AAGGTCTGTC TAAATCTTCT TCTTGGGGG CAATGGTTAT TCATTTCTTC GGAGGGATTC	1440
ATGAAATTTA CTTTCCTTAT GTTATGATGA AGCCTACTCT ATTTTtagCT GCTATGGCAG	1500

	652	
GAGGTATCTC TGGAACCTTT ACTTTTCAAC TCTTAGACGC TGGTCTTAAA TCTCCAGCTT	1560	
CACCAGGTTC TATTATTGCG ATTATAGCTA CGGCGCCAAA AGGTGTTTGG CCCCATCTAA	1620	
ATGTTCTTTT AGGTGTTTTA GTGGCAGCAG TTGTTTCTTT CCTTGTAGCA GCCCTTATTC	1680	
TTTCATGCAGA CAAGTCAACT GAGGATTCGC TCGAAGCTGC TCAGGCGGCT ACCCAAGCAG	1740	
CTAAGGCTCA GTCTAAAGGT CAGTTAGTAT CAACTTCTGT TGATGCAGTT GTTTCGACAG	1800	
ACTCAGTGGA AAAAATCATT TTCGCCTGCG ATGCTGGTAT GGAAGCTCT GCTATGGGAG	1860	
CTAGTATTCT TCGAGATAAG GTTAAAAAAG CAGGTCTAGA GATTCCAGTA TCTAATCAGG	1920	
CAATCTCAAA TTTGCTTGAT ACACCAAAAA CATTAATTGT TACTCAGGAA GAACTGACAC	1980	
CAAGAGCTAA AGACAAGAGT CCAAGTGCTA TTCATGTTTC TGTGATAAT TTCTTAGCGT	2040	
CCTCTCGTTA TGATGAAATT GTAGCTTCAT TAACAGGAGC TTCTCCAATA GCAGAAATTG	2100	
AAGGAGATAT ACCAACTTCA GCACCAGTAG ATAGTCAGGA AAGTGACCTT AACCATATTG	2160	
ATGCTGTAGT AGTTGCTTAT GGTAAAGCAC AGGGAAGTGC AACTATGGGC TGTGAAACGA	2220	
TTGCGGCTAT TTTTAGAAAC AAGAATATTC GTATTCCAGT TTCTACTGCC AAAATTTTCAG	2280	
AATTAGGTGA ATTTAATTCT AAAACATAA TGATTGTAAC AACTATTTCT TTACAGGCAG	2340	
AAGTGCAGCA AGCAGCACCG AATTCTCAAT TTCTTATTGT GGATAGTTTA GTAACAACAC	2400	
CAGAAATGA CAAAATGGCT GCTAGAATGT ACAAATAGAA CTAGAGGTTT CTAAATTACG	2460	
AATGCTATTA ACCAAACGAG AAGAACAATT ATTGAAGGCT TTCCTACATG TAGGGAAGCT	2520	
TTCAATGCAA GATATGACTG AAATCTTACA GGTTCATCT AGAACAATTT ATCGAACTTT	2580	
ATCAGATTTG ACAGATAGCA TGGAGCAATA TGAATCGAA ATAACGAAGC ATGGGAAATA	2640	
CTATATTTTG ACTGGAGAGT TGGATGATT GCCGACAGAA CTGGAAGTGT TAGTTGAGTA	2700	
TAGTCCCAA GAAAGACAAG AGTTGATTAC CTATCGCCTT CTGACTGAGA GTGGTTTGT	2760	
CACCAATGAA GCATTGCAAG AGTGCACGAA AGTCAGTAAT GTAACATTA TTCAGGATAT	2820	
TTCAGATATT GATAAGCGTC TTTTAGACTT TGATCTGAAA ATTGAACGAC AAAAAGGTTA	2880	
TCGGATTCTT GGTGATTCAG TTGGTAAGAG AAGATTTTGG GCTATTTTAC TGACAAACTG	2940	
TATCTCAGTA GCAGATTTTT CAACCGGTAA TTTTGGGAGC TTTGATATTT TAGAAGCAGA	3000	
TAGAACTGGG CTGGCCAGTC AGATTGTTAA TAAGCAACTG TCAGGTTTTT CAGATATGGA	3060	
TGCTAGGATG AAGATGTTTT TTGCGATCTT GTTATCTCT ATAGGTCAGG AGCAAAACAT	3120	
TGAAAATTCA CCTAATACTA GTAAGCAGGC TTTGGAAATT TCTCAAAAAA TTTTCAAGC	3180	
TTACTCTAAG CAGACTGCAC AATTTTATAG TATTCAGGAA ATTATCTATT TTGCGAGCAT	3240	
CTTGGATGAA TTAATCATTA AACGTCAGGA CAATCCGCTC TTTACGGAGA AATTTGATGG	3300	

653

TGAATTTTTC TACAATATTT CAAATCTGAT TGATACGGTT TCCATGTATA CCAAGATTGA	3360
CTTTTTTAAG GACAAGGTTT TATTCATTT TCTTTTCCAT CATATTCGGC TCAGTTTAGG	3420
CGTCCCTATC CTTTTCAGG GTGAAAATTT GCCAGAATCT ATCCAGATTT TAGTTGAAAG	3480
GAATAAATTT CTTTATACAG TCATCAGTCT TTTAGTGAAT GATATTTTTC CGAAATATCT	3540
TCATACAGAG TATGAGTATG GCATGATTGC CCTACATTTT ATCTCTAGCT TAGGCCGTAG	3600
.TCCAGAGATT TATCCAGTCC GTGTTTGCT TTAAACGGAT GAACGTCGGG TCACTAGAGA	3660
TTTATTAGTC AGTAAATTA AGAGTGTTC TCCTTTTGTA GAGTTGATAG ATATTCAATC	3720
TCTAGTAGAT TACCACAGTA TTGATCTCAG TCAGTATGAT TATATTTTAT CTACCAAGCC	3780
GCTGACTAAT CAGGAAATCG ATGTAATTC TAGTTTCCA ACCGTCAAAG AATTGCTTGA	3840
ATTACAGGAA CGACTTCAGT ATGTACAGGC ACATCGTACA ATTGTCGCGC GTGATGCTAT	3900
CGCTCCAGAG AAAAGTTATG ACTTGCAAGA TTATTTAATA TCTAGTAGTC AGCTTTTGAG	3960
TCAATTCGAG TTGGTTCAAT TGGAGAATAA TCAATCATTT GAGCACACGG TAGAACAAAT	4020
CATCCAATAT CAGAAGAATG TGAGTGACAG AGCTTACCTA ACAAGAAAAT TGTATCTCA	4080
CTTCCAGAAT AGTCCTATGG CTATTCCTAA TACTGGTCTG GTGCTTTTAC ATAGTCAGTC	4140
TAGCAAAGTA ACAACAAATA GTTTTACTAT GTTTGAACTC AAACCTACCTA TCTCCGCATT	4200
GTCAATGAAA CGAGAGGAAG AAGAGGTCAA AAGGTGTCTG CTAATGCTAA TGTCTAAAGA	4260
AGCTAGCGAG GAAGCTAGAG ATTTAATGAC AGCTATTAGT CAGTCGATTA TTGAAATCA	4320
TCTTTATACA GAGATTTACA AGACGGGAAA TCAATCCATT ATTTATCAGA TGCTAAATAC	4380
TATTTTAAAC GAAAAATTA AGAAATTGGA GAACTAATAT GAACTTGAA AAACATTTGA	4440
TTAAGCTTAA TAAACAATTT TCTAACAAGG AGGAAGCTAT TTGTTATTGT GGGCAAGTTC	4500
TTTATGAGGG TGGATATGTT AATGAAGACT ATATTGAAGC CATGATTGAG CGAGATAAAG	4560
AGCTATCTGT TTACATGGGT AACTTTATCG CCATACCGCA TGGAACAGAT GCAGCAAAAA	4620
ATGATGTCTT CAAGTCTGGT ATTACAGTCG TTCAAGTCCC TAGAGGGGTT GATTTTGGGA	4680
ATGTATCTAA CCTCAAGTG GCAACGGTTC TTTTGGTAT TGCTGGTATT GGTAATGAAC	4740
ACTTAGAAAT TATTCAGAAA ATTTCTATCT TCTGTGCAGA TGTAGATAAT GTTCTTAAAC	4800
TAGCAGATGC TCAGTCAAAA GAGGAAGTAT TGCCTTATT TGATGCTGTT GAATAATTGA	4860
ATTTAGTCAT TTGTCATCTA GTATATATGT CCTCAAATA GGAAAAGGAG AAATTGAATG	4920
AAACATTTCTG TTCATTTTGG TGCCGGTAAT ATCGGTCGTG GTTTTATAGG TGAAATTCTA	4980
TTTAAAAATG GTTCCATAT TGATTTTGTG GATGTCAATA ATCAGATAAT TCATGCTCTG	5040

654

AATGAAAAGG GCAAGTATGA AATTGAAATT GCACAGAAAG GACAGTCTCG TATAGAAGTA	5100
ACTAATGTGG CTGGCATTAA TAGCAAAGAA CATCCTGAGC AAGTCATTGA AGCGATTCAA	5160
AAGACGGATA TTATTACTAC TGCAATCGGA CCTAATATAC TCCCTTTTAT CGCCGAACTT	5220
CTAGCCAAAG GAATCGAAGC TCGCCGAGTT GCAGGAAATA CACAGGCATT GGATGTTATG	5280
GCCTGTGAAA ATATGATTGG CGGGTCTCAA TTTCTTTATC AAGAAGTCAA GAAATATTTA	5340
AGTCCGGAAG GTTTGACATT TGCTGATAAC TACATAGGTT TTCCAAATGC TGCAGTAGAC	5400
AGGATTGTTC CAGCACAAAG TCACGAAGAT TCCCTTTTGT TTGTGGTCGA GCCCTTTAAT	5460
GAATGGGTCG TGGAAACCAA GCGTCTTAAA AATCCAGATT TACGTCTAAA AGATGTGCAT	5520
TATGAAGAAG ATTTAGAACC CTTTATTGAG CGAAAACCTT TTTCAGTCAA TTCTGGACAT	5580
GCAACTTCAG CTTACATTGG TGCGCATTAT GGTGCCAAGA CAATTTTGGA AGCTCTTCAA	5640
AATCCTAATA TTAAATCTCG GATTGAATCT GTATTAGCTG AAATTCGGAG TCTCTTGATT	5700
GCCAAATGGA ACTTTGATAA AAAAGAATTG GAGAATTATC ACAAAGTCAT TATAGAACGA	5760
CTTGAAAACC CTTTCATAGT GGACGAGGTT AGTCGCGTAG CTCGTACTCC AATCCGAAAA	5820
TTAGGCTATA ATGAACGATT CATCCGGCCG ATACGTGAAT TGAAAGAACT CAGTTTGTC	5880
TATAAAAACC TACTTAAAC AGTTGGCTAT GTCTTTGACT ATCGCGATGT AAATGATGAA	5940
GAAAGTATTC GATTAGGTGA ATTGTTGGCT AAACAATCAG TCAAAGATGT TGTATACAA	6000
GTTACAGGTT TAGACGACCA AGAATTGATT GAGCAAATTG TAGAGTATAT TTAATCTTTT	6060
TCGAAAATCT CTTCAAATCA GGTTAGCATC GCTTTGTCTT AGGCATATGT TGTCTATCT	6120
ACAACCTCAA AGCAGTGCTT TGAGCTGACT CCGTCAGTCT TATCTGCAAT CTCAAAACAC	6180
TGTTTGAGTT ATCTGCGGTA ATCTTTCTAG CTTGTCTTTG ATTTTGTGTTG TTATTTATAA	6240
GGTAAAAGAA GCTGGACAAA AAGTCTTCAA AATCGGGAAA AGGCAGCCTA TCGGGTGTTC	6300
AAAAATCTTG ATAGGATGTC CTTTATTATG GAAAGCCTTA TTGGATTTTC TCCTCAGATT	6360
GAGTTTTTGA TCAGCTTTAT GAGATAGGTC TTGCTAGAGA TGTAGCCCAT CATGTTATTT	6420
TTATGGACAG TGGGAAAATT GTTGAAAAA ATAATGCCCA TCAATTCTTT AGTCGTCCAA	6480
GAGAAGAACG AACCAAGCAA TTTTGAACG AATTCTTTTC AATGCGATCT ATATAGTAAA	6540
ATGAAACAAG AACAGGACAA ATCGATCAGG ACAGTCAAAT CGATTTCTAA AAATGTTTTA	6600
GAAGTAGAGG TGTACTATTC TAGTTTCAAT CTACTATATA ACTGAAAAAT TAGATAAATT	6660
AGTTTTGGAA AATGACTAAC CAAAAGATAT CCAAAGTAGT CTAAAATTGT CTATACTTTA	6720
TGAGTGTTTT AGTTAGGAAA AAGGCTTGTT GTCTATAATT GTCTGCATTA GTCTAGATTT	6780
TATTTATAGA AAATGTTATA ATAGACTGTA TTTAAAAAT TTTAAGGAGA AATGACAGAA	6840

655

TGTCTGTATC ATTTGAAAAC AAAGAAACAA ACCGTGGTGT CTTGACTTTC ACTATCTCTC	6900
AAGACCAAAT CAAACCAGAA TTGGACCGTG TCTTCAAGTC AGTGAAGAAA TCTCTTAATG	6960
TTCCAGGTTT CCGTAAAGGT CACCTTCCAC GCCCTATCTT CGACCAAAAA TTGGGTGAAG	7020
AAGCTCTTTA TCAAGATGCA ATGAACGCAC TTTTGCCAAA CGCTTATGAA GCAGCTGTAA	7080
AAGAAGCTGG TCTTGAAGTG GTTGCCCAAC CAAAAATTGA CGTAACTTCA ATGGAAAAAG	7140
GTCAAGACTG GGTATCACT GCTGAAGTCG TTACAAAACC TGAAGTAAAA TTGGGTGACT	7200
ACAAAAACCT TGAAGTATCA GTTGATGTAG AAAAGAAGT AACTGACGCT GATGTGGAAG	7260
AGCGTATCGA ACGCGAACGC AACAACCTGG CTGAATTGGT TATCAAGGAA GCTGCTGCTG	7320
AAAACGGCGA CACTGTTGTG ATCGACTTCG TTGGTTCTAT CGACGGTGTG GAATTTGACG	7380
GTGGAAAAGG TGAAAACTTC TCACTTGGAC TTGGTTCAGG TCAATTCATC CCTGGTTTCG	7440
AAGACCAATT GGTAGGTCAC TCAGCTGGCG AAACCGTTGA TGTATTCGTA ACATTCCCAG	7500
AAGACTACCA AGCAGAAGAC CTTGCAGGTA AAGAAGCTAA ATTCTGACA ACTATCCACG	7560
AAGTAAAAGC TAAAGAAGTT CCGGCTCTTG ACGATGAACT TGCAAAAGAC ATTGATGAAG	7620
AAGTTGAAC ACTTGCTGAC TTGAAAGAAA AATACAGCAA AGAATTGGCT GCTGCTAAAG	7680
AAGAAGCTTA CAAAGATGCA GTTGAAGTG CAGCAATTGA TACAGCTGTA GAAAACTGCTG	7740
AAATCGTAGA ACTTCCAGAA GAAATGATCC ATGAAGAAGT TCACCGTTCA GTAAATGAAT	7800
TCCTTGGAAT TTTGCAACGT CAAGGGATCA ACCCTGACAT GTACTTCCAA ATCACTGGAA	7860
CTACTCAAGA AGACCTTCAC AACCAATACC AAGCAGAAGC TGAGTCAGT ACTAAGACTA	7920
ACCTTGTTAT CGAAGCAGTT GCCAAAGCTG AAGGATTGTA TGCTTCAGAA GAAGAAATCC	7980
AAAAAGAAGT TGAGCAATTG GCAGCAGACT ACAACATGGA AGTTGCACAA GTTCAAAACT	8040
TGCTTTCAGC TGACATGTTG AAACATGATA TCACTATCAA AAAAGCTGTT GAATTGATCA	8100
CAAGCACAGC AACAGTAAAA TAATCTTAAT AAACAGAAAA CCCACCTGAA TTGGTGGGTT	8160
TTCTGATGCA CTATTTCCA AAAATCTCTT TGAGGTCTGT GTCTGTAATC CCAATCATGG	8220
CTGGGATGCG GTCCAGTTT TCTTCGGTTA GGATGTAGGA TTGTTGAGG GCACTTGATG	8280
TGACTGTTTC AGAGACAGCT TGTGCTTTT CTTCAACATT CTCCAGTAGA TCACTGAAGC	8340
GTCAATCAG ATAGGTTTTT CGGGCAGTTC CGATGTGTTG GGTAGCATAG TCGAAGGCTT	8400
GTAATTCGCC TAGTAAGATG AGTTTGCTTT TGGCACGTGT AATGGCTGTG TAGATGAGAT	8460
TTGCTCTCCAG CATACGTCGG CTAGCACTAG TAATCGGTAG GATGACAACT GGGAACTCAC	8520
TTCCCTGAGA CTTATGAATA CTCATGGCAT AGGCCAAGCG AATCTGTAC CATTCGTTAC	8580

656

GGGGGTAAGA GACTTCATTA CCATCAAAAT CAATGACAAT CTCGTCTTGT TTCGATTTCGG	8640
TGTATTTTACC AGGAATCAGG TCTGTGATAG CTCCTAAATC CCCATTAAAG ACATTGATTT	8700
CAGCATCGTT AACCAAATGA ATGACCCTGT CTCTCTTACG ATAGTGACAC TGAGGAGCTT	8760
CAAACTGAG TTGATCTTTT TGTGGGGGAT TGAGCAGGTC TTGCATGAGC TGATTGATAG	8820
CATCAATCCC TGCCGTCCCT CGGTACATAG GAGCCAGAAC TTGGATATCA CGGGCGGGAA	8880
TACCATTTCT GAGGGCGGCA CCTAAGATTT TTTCAATGGT GGCAGGAATA TGGCCACTAG	8940
CAATTTCAAA GTAGGAACGG TCAGCTTTTT TTTGGGTGAA ATCAGCTGGC AAGATGCCCT	9000
GTCGAATCTG ACTAGCTAGG GTGACGATGG TTGATTCCTT GCTTTGTGCGA TAAATTTTTT	9060
CCAAGCGAGT CTGAGGAATC AAAGGAATAT GAAGTAGATC CGCTAGAACC TGTCACGGAC	9120
TGACAGAAGG TAGCTGATCA CTGTCACCTA CGATGAGGAT CTTACTGTTA GAAGAGATAT	9180
TGGAGAAGAG TTGATTGGCC AGCCAAGTAT CTACCATAGA GAATTCATCC ACGATGATAA	9240
AGTCAGCATC TAGGTAATCT TCCAGATGAC TGGTATCATC GTCACCTGTC ATTCCCAAGT	9300
GGCGATGTAT GGTGCGGCTA GGCAAACCTG TCAATTCATT CATGCGACGA GCAGCTCGAC	9360
CAGTTGGAGC AGCAAGAAGA ATGGGCAGAT TGCTTTTCTT CCTGAAGTCA AGTCCTTCTA	9420
AAAGGGCATA AACAGCAATG ATTCCATTGA TAACAGTTGT CTTACCAGTA CCAGGCCAC	9480
CTGTCAGGAT AAAGACCTTA TTCTGGATAG CATCACAGAT AGCCTGTMTT TGAATGTTAT	9540
CATACTCAAT TCCCAGTTCT TGCTCGACAG TAGTGATATG TTTTGAATG GTTTCTAAAT	9600
CATGACTCTT CTGTTTTCCT TTTTCAAGGA TACGAACCAA GTGACTGCGG ATGCCTTCCT	9660
CAGCGAAAAA GAGGCTGTTG TCAAAGATCT TGGTATCAAT CTGCTGAACC TTGTCTTCTT	9720
CGATCAGGTA GGAGAGCTCT TGGGCAACTT GGCTGGGGTC TAGTTCCACG GGACGGGAAG	9780
ACTCAAGGAG AGTAAGGTT TGTTCAGCA AATCCCGTGC TTCAACATAG GTGTCCCCTG	9840
TTCCATACA GGCCTGAAAA AGACTGTGAA CTAGACCGGC GCGGAAGCGT TCAGGAGCCT	9900
GACTTTCGAT GCCTAGTTCC TCAGCTAGTT GGTCAGCAAT GGTAAAGCCC AAACCTTGA	9960
TATCCTCAAC CAGCTGGTAG GGATAATTTT CAACCACATC AAGGGTTTCT TCCTTGTAAT	10020
AGTCTTGAAT CTGAAAGGCT AGTTTGTGG GAATGCCGTA GTTGGCTAGT TTGGCCAAAA	10080
TCATCTCCGT TCCGTAGTTG AGACGGAGAG TGGAGACGAA AGCCTCGCGA TTTTGGCAG	10140
AGAGTCCTGC GATGCCCTCT AACTTTTCTG GGTGTGCAA AATTTGCTCA ATGGTATTTT	10200
CGCCATAGGT ATCCACGATT TTCTGAGCTG TCTTGAGACC AATCCCCTTG AAATGGCTAC	10260
TTGAAAAGTA CTTGACCAAG CCCTTACTAG TTGGTTTGC GCGATCATAA CGACTGATTT	10320
GCAGTTGTTT TCCATACTTG GAGTGCTGGA CAATTTGCCC CAAAAAGTA TAGTCTTCGC	10380

CCTCAATTAC ATCAGCCATG GTTCCTGTGA CAATGATTTC AAAATCATCA AAATCCTCTG	10440
CGTCCGTATC GTCGATTTCT AGGAGGAGGA TCGATAAAA ATTGCTGGGA TTTTCAAAAA	10500
TAATCCGTTT AATAGTTCCT GAAAAATAAA CTTCCATAAA ATTCCTTTGC ATGAATAGGT	10560
GAGAGTTGGG ATTGTTTTTA TTTTATACTC TTCGAAAATA TCTTCAAACC ACGTCAGCTT	10620
CCATCTGCAA CCTCAAAACA GTATTTTGAG CTGACTTCGT CAGTTCTATC CACAACCTCA	10680
AAACACTGTT TTAAGCAGCC TACGGCTAGC TTCCTAGTTT GTTCTTTGAT TTTTCATTGAG	10740
TATTTGTAAA TAAACAATCA CTTCTCACGA TAGAAGAAGA GGCTGAGATT GGTGATTCTC	10800
TGCCTCTTAG GTTCTTAAA ATGTTCCGAT ACGGGTGATT GGCCATAAGC GGAATTTAGC	10860
TTCCCTGTG ATATCTTTTG CTTTGAAGGT ACCTACGTGG CGGCTGTCGC TCGAAACCAA	10920
GCGGTCATCT CCGAGGAGAA GGTATTCTCC TTCTGGAACA GTAAAGCTAA AGTTGGTGT	10980
GTAGTTGACA TCAACTGTGA AGGCTTGAGC TTTTGTAGCG ATACTTCTAA AGAAAGTTCC	11040
TTTATTTCTT TCAAAGCCCT TGCCTGAGTA AGTGCTTTGG AGTTTGTCAT CCTTGAAGCG	11100
TTTGATATAG TCTGCTAGAT AAGGCTCGTC CGTTTCTTTG TCATTGATGT AGAGTTTATC	11160
ATTTTCGTAA CGAATGGTGT CGCCAGGCAT TCCAATCAG CGCTTGACGA TGTCTTATT	11220
GCCATCTTCC TCATGGGCCA CCACGATATC AAAACGGTCA ATAGGAAGGT GTTTTACAAC	11280
GAAGAGAATT TCGCCATCCG CTAGGGTCGG ATCCATGGAA TGTCTTCTA CGCGAACATT	11340
GCTCCAAAAA AAGATACGAC TTAAAGCTAG TAATGACAGA ATTAGGAGGA ACAATCCCCA	11400
CTCTTTTAAG AAATTTTAA ATGAATTCAT AACTTACCTT TCTAAGCGTT TTTTCGCTTT	11460
TTCAGTGTTT TTAAAGTGCA ATTTGGCGCA GAAGCTGAGT CCCTGCATAC CATAGGCTTG	11520
CAAAATCTGG CTAGCCACCT TGTGAGAAGC CGTTCAGCT CCACTTGGGA GCTGATAACC	11580
CAGTTCTCGT CCCAAATTTT CAAGATTTTC CAGAAAGAGA TCACGCGCAA TGACAGAAGA	11640
AACTGCGACA GACAAGTATT TGCCCTCAGC CTTTCTTCT AAGCTGATAG GATTGCTGAA	11700
ACGATTGGCC TCTTGTGCCA AGTACTGTG ATAATTTTGA GCACTGGTAA AGGCATCAAT	11760
CACAATTTTC TCAGGCTGAA CACCTTTTTG AAGGAGGAGA TAGATAGCCT GATTATGGAG	11820
GGCAACCTTA ACCGAAACAG CGTTGTAGCG GTCTCCGATG ACCTCGTTGT ACTTGCTGGG	11880
TGAGAGAAGG AGTGCCTGGT GCTGAATTTT TTCCTTGAGA ATAGGAGTAA TCTGACGGAT	11940
CTTTTGGTCG GTCAGAGTCT TAGAATCCCC CACACCGAGT TTTTCGTAAAA AGTCGTGCTG	12000
GTCAGGTGTG ACAAAGGCAG CCACAACCTGC AAGCCACCA AAGTAGGAAC CATTTCCAC	12060
CTCATCTGTC CCAATTAAAG GAAGATTTTG TCCGCTGGTT TGCTCTACAG CTTGATAGCC	12120

658

AAAGAACTG GCGTATTTT CAGCCCCCTC ACCCTGAAGC AAGATTTTTC CAGAAGTATA	12180
GATAGAAACC GTTGCTTGAG GTAGTTTCAA AAAGTAGCGG ATATAGGGAT TCTTGCTAGG	12240
AGCCAGACTG GTTTGATAGT GTTCAAGAAA AGCCTGAATA TCCTTTTCGC TTGGTGTGAG	12300
TGTGATACTT GCCATAGTTT CTATTGTACC AAAAAAGCAG TAAAATTTGT AAAAAGTAC	12360
AAAAATAGCG AATTTTGGTA TAATATCGTG AGGTGAATTT TATGGCAAAT CTAAATCGAT	12420
TCAAATTTAC ATTCGGGAAA AAATCGTTAA CCTTGACAAG CGAACATGAC AACCTTTTTA	12480
TGGAGGAAAT CGCTAAGGTT GCGACAGAAA AATACCAAGC AATTAAAGAA CAAATGCCTA	12540
GCGCAGATGA TGAAACAATC GCTCTTTTGT TGGCAGTCAA CTGTTTATCA ACTCAGCTCA	12600
GCCGTGAGAT TGAATTTGAC GATAAGGAGC AAGAGCTAGA AGAACTCCGT CACAAGCTTG	12660
TGACTTGTA GCAAGAACAG AGCAAGATTG AGGATTCCTT ATGATTTTCAT TCCTTCTTCT	12720
ATTGGTCTTG GTTTGGGGAT TTTATATCGG CTATCGGAGA GGCCTGCTCT TACAGGTTTA	12780
TTACCTGATT TCAGCCATGG CATCGGCTTT TATGGCTGGC CAGTTTATA AGGGGCTTGG	12840
AGAGCAATTC CATTTATTGC TCCCTTATGC AAATTCGCAG GAAGGTCAGG GGACTTCTT	12900
TTTCCCATCG GATCAACTCT TTCAGCTGGA TAAGGTCTTT TATGCAGGTA TCGGCTACTT	12960
GCTTGATTTT GGGATTGTCT ATAGCATTTG TCGTTTACTT GGTCTTCTCT TACACTTGAT	13020
TCCTAGCAAA AAAGTGGGTG GTAAGTTGTT CCAAGTTTCA GCAGGTATCT TGTCCATGTT	13080
GGTGACCTTA TTTGTCTTGC AAATGGCCTT GACAATCTTG GCGACCATCC CCATGGCAGT	13140
TATACAAAAT CCTCTTGAAA AGAGTATCGT CGCAAAACAC ATCATCCAGA GCATACCGGT	13200
AACAACCACT TGGCTCAAAC AAATCTGGGT GACAAATTTA ATCGGATAAA AAGGGCAGGA	13260
GTTTTCTTAG CCCTTTGTTT ACAGATTTGA CTCGAATCTA TCAGAATGTA AAAAGCTACC	13320
ACACCTAGAC ATTCAAAGAC AAGGAAATAA AGATGAATAA GAAAATATTA GAAACATTAG	13380
AGTTCGATAA GGTCAAGGCC TTGTTTGAGC CTCATTGTGTT GACCGAGCAG GGCTTGGAGC	13440
AATTGAGACA ACTGGCTCCG ACTGCCAAG CAGATAAAAT CAAACAGGCT TTTGCTGAGA	13500
TGAAGGAAAT GCAGGCTCTT TTCGTGAGC AACCGCATTT TACTATTCTC TCAACTAAGG	13560
AAATGCGAGG AGTCTGCAAG AGGTTGGAGA TGGGAGCGGA TCTCAATATC GAGGAGTTCC	13620
TACTCTTGAA ACGCGTGCTT CTTGCCAGCC GAGAACTTCA AAATTTTAC ACCAATCTGG	13680
AAAATGTCAG CTTGGAAGAA TTAGCCCTTT GGTGAGAA ATTACATGAT TTTCCGCAAT	13740
TACAAGGAAA TCTTCAGGCC TTAAATGATG CGGGTTTCAT TGAAAATTTT GCCAGTGAAG	13800
AATTGGCGCG AATCCGTCGA AAAATACATG ATAGCGAGAG TCAGGTACGC GATGTTTTAC	13860
AAGACTTGCT CAAGCAAAA GCGCAGCTGT TGACGGAAGG AATTGTTGCT AGCAGAAATG	13920

659

GCCGTCAGGT TTTACCAGTC AAAAACACCT ACCGCAATAA GATTGCAGGT GTCGTTTCATG	13980
ATATTCTGTC TAGTGGAAC ACCGTCTATA TCGAACCCCG TGAGGTAGTC AAAGTGAGCG	14040
AAGAAATTGC TAGTCTGCGA GCAGATGAGC GCTATGAAAT GCTTCGCATT CTCCAAGAAA	14100
TTTCTGAGCG TGTCCGCCCT CATGCGGCTG AGATTGCTAA TGACGCTTGG ATTATCGGTC	14160
ATCTGGACTT GATTCGTGCC AAGGTTTCGAT TTATCCAAGA AAGACAAGCA GTCGTGCCTC	14220
AGCTGTCAGA AAATCAAGAG ATTCAACTGC TCCATGTCTG CCATCCTTTG GTCAAAAATG	14280
CCGTCGCAAA TGATGTCTAT TTTGGTCAAG ATTTAACAGC TATTGTCATT ACAGGTCCCA	14340
ATACAGGTGG GAAGACCATC ATGCTCAAAA CTCTGGGCTT GACACAGGTC ATGGCCAGT	14400
CAGGATTGCC GATTTTAGCA GACAAGGAA GTCGTGTTGG TATTTTGA GAAATCTTTG	14460
CTGATATTGG AGATGAGCAG TCTATTGAGC AGAGCTTGTC TACCTTCTCT AGTCATATGA	14520
CCAATATCGT GGATATTCTT GGCAAGGTCA ACCAACATTC ACTCTTACTT TTGGATGAGT	14580
TGGGGGCTGG TACTGATCCC CAAGAGGGAG CAGCCCTTGC CATGGCTATT CTGGAGGACC	14640
TTGCGCTGCG TCAAATCAAG ACCATGGCGA CGACCCACTA TCCAGAATC AAGGCCTACG	14700
GTATTGAGAC AGCCTTTGTG CAAAATGCCA GTATGGAGTT TGATACTGCA ACTCTTCGCC	14760
CGACCTATCG CTMTATGCAG GGTGTTCTTG GCCGAAGTAA TGCCTTTGAA ATTGCCAAAC	14820
GTCTAGGCCT ATCTGAAGTT ATCGTAGGAG ATGCCAGTCA GCAGATCGAT CAGGACAATG	14880
ACGTCAATCG TATCATGAG CAATTAGAAG AGCAGACGCT GGAAAGCCGC AAACGTTTGG	14940
ACAAATATCCG TGAGGTGGAG CAAGAAAATC TCAAGATGAA CCGTGCCTA AAAAACTCT	15000
ACAACGAGCT TAATCGTGAA AAGGAAACCG AGCTTAACAA GGCGCGTGAA CAGGCTGCTG	15060
AGATTGTGGA TATGGCCCTA AGTGAAAGTG ACCAGATTCT CAAAAATCTC CACAGTAAAT	15120
CCCAACTCAA GCCCCACGAA ATCATTGAAG CCAAGGCCAA GTTGAAAAA TTGGCTCCTG	15180
AAAAAGTGGA CTGTCTAAA AATAAGGTCC TTCAAAAGGC CAAGAAAAA CGAGCTCCAA	15240
AGGTGGGAGA TGATATCGTG GTTCTCAGTT ATGGTCAGCG TGGTACCTTG ACCAGTCAAC	15300
TCAAGGACGG TCGCTGGGAA GCCCAAGTTG GCTTGATTAA GATGACCTTG GAAGAGAAAG	15360
AGTTTGATCT TGTTCAGCC CAGCAAGAAA AACCAGTCAA GAAGAAACAG GTCAATGTTG	15420
TGAAACGAAC TTCTGGGCGA GGACCTCAAG CTAGACTGGA TCTTCGAGGC AAGCGCTATG	15480
AAGAAGCCAT GAATGAGCTA GATACCTTCA TCGACCAAGC CTTGCTTAAC AATATGGCTC	15540
AAGTTGATAT CATCCATGGT ATCGGAACAG GAGTCATCCG TGAAGGAGTT ACCAAATACT	15600
TGCAAAGAAA CAAACATGTC AAGAGTTTCG GCTATGCCCC ACAAATGCT GGAGGCAGTG	15660

660

GTGCGACTAT TGTCACTTTT AAAGGATAGC AGTATTCTGG ACTTTATAAA GTAAAAACTG	15720
TTGAACTAAT TTTTACTAAT AAACACATTG ACAAAGCCA ACATTTTGTG TAAAATTAGA	15780
ATCAATTAAA TACCAACACC GAATGAAGTT TAATAGAAGT GGGGAATCGT TTGATTTTCC	15840
ATGACTGTAA ATGGACGGAA CTCTGGAGAG ACCGTAAAGG CACCGAAGGG CAAGGCAGGC	15900
AACGCTCAA ACTCTCAGGT AAAAGGACAG AGCTAGGATA GACCGCTTTT TAGCATTTAT	15960
CTAAGCATTC CAGAGTACAT GTATCTTGCA TGTGCTCTTT CTTTGGGGT TGAAACGATA	16020
GGAGAAGGAA ATGTTAGAAT TGCTTAAATC AATCGATGCT TTTGCTTGGG GACCGCCCT	16080
CTTGATTTTA TTGGTCGGAA CAGGGATTTA CCTAACTATT CGGCTAGGAC TCTTGCAGGT	16140
TTTGCGTCTA CCCAAGGCCT TTCAGCTTAT TTTTATCCAG GATAAGGGAC ATGGTGATGT	16200
ATCCAGTTT GCAGCTCTGT GTACAGCCTT GGCATCAACT GTTGAACAG GAAATATCAT	16260
AGGAGTTGCG ACGGCTATCA AGGTTGGTGG ACCAGGAGCT CTATTTTGA TGTGGATGGC	16320
GGCTTTCTTT GGAATGGCTA CCAAGTATGC GGAAGGACTC TTGGCCATCA AATACCGCAC	16380
CAAGGACGAC CATGGTGCAG TAGCGGGAGG TCCCATGCAT TATATCCTTC TAGGGATGGG	16440
AGAAAAGTGG CGACCACTTG CTGTTTTGTT TGCAGTAGCA GGAGTATTGG TTGCTCTCTT	16500
GGGAATCGGA ACCTTCACCC AAGTCAACTC GATTGCAGAA TCTATCCAAA ATACAACGAC	16560
GATTTGCGCA GCCATCACAG CTCTCGTCTT GTCTGTCTTT GTAGCGATTG CAGTCTTTGG	16620
TGGACTCAAG TCTATTTCTA AGGTTTCAAC TACTGTTGTT CCTTTTATGG CCATCATTTA	16680
TATCTTAGGA ACTCTTACAG TTATTTTCTT TAATATCGGA AAAATCCCTG GCACAATCGC	16740
TTAGTCTTT ACCTCAGCTT TTAGTCCCCT TGCTGCGGTA GGTGGATTG CTGGTGCTAG	16800
CGTTCGGATG GCTATTCAAA ATGGTGTGGC GCGTGGTGTG TTCTCAAACG AATCTGGTCT	16860
GGGTTCTGCT CCTATTGCAG CTGCAGCTGC CAAGACAAAT GAACCAGTAG AGCAAGGTTT	16920
GATTTCCATG ACAGGAACCT TTATTGATAC CCTCATCATT TGTACTCTAA CTGGTTTGAC	16980
CATCTTGGTA ACTGG	16995

(2) INFORMATION FOR SEQ ID NO: 83:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 28473 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

CCGGGGCTTT TGTAGTATAA TAGAGATACG TTTTGAAAGT AGGAGGTATC TATGGACTTA 60

661

ACTAAGCGCT TTAATAAACA GTTAGATAAA ATTCAAGTTT CGTTGATTCG TCAGTTTGAC	120
CAGGCTATTT CGGAGATTCC TGGGGTCTTG CGTTTGACCT TGGGGGAACC TGATTTTACA	180
ACGCCAGACC ATGTCAAGGA GGC GGCAAG CGAGCGATTG ATCAGAACCA ATCCTACTAT	240
ACAGGGATGA GTGGTCTGCT GACTCTACGT CAGGCAGCCA GTGACTTTGT TAAGGAAAAG	300
TACCAACTGG ACTATGCTCC TGAAATGAA ATCTTGTTA CAATTGGGGC GACAGAGGCT	360
TTATCTGCGA CTTTGACGGC TATTTTGAA GAGGGAGACA AGGTACTTTT GCCAGCTCCT	420
GCTTATCCAG GCTATGAACC GATTGTTAAC TTAGTTGGGG CAGAAATTGT TGAGATTGAT	480
ACGACTGAAA ATGGTTTTGT CTTGACTCCT GAGATGTTGG AGAAGGCCAT TTTGGAGCAG	540
GGTGATAAGC TCAAGGCGGT TATTCTCAAC TATCCAGCCA ATCCGACAGG AATTACCTAC	600
AGTCGAGAGC AGTTAGAGGC CTTGGCAGCT GTTTTACGCA AGTACGAAAT TTTGTTGTC	660
TGTGATGAGG TTTACTCAGA ATGACCTAC ACAGGCGAAG CCATGTGTCT CTAGGAACGA	720
TGTTGAGAGA CCAGGCTATT ATTATCAATG GTTTGTCTAA ATCGCATGCC ATGACAGGTT	780
GGCGTTTGGG GCTGATTTTC GCTCCTGCGA CCTTCACAGC CCAGTTAATC AAGAGTCACC	840
AGTACTTGGT CACTGCCGCA AATACCATGG CGCAACATGC TGCGGTAGAA GCCTTGACGG	900
CTGGTAAAAA CGATGCGGAC CCATGAAGAA GGAATATATC CAACGTCGGG ACTATATCAT	960
CGAAAAATG ACTGCTCTTG GTTTTGAGAT TATCAAACCA GACGGTGCCT TCTATATTTT	1020
TGCTAAATTT CCAGCGGGCT ACAATCAAGA CTCCTTTGCT TTTCTGAAGG ATTTTGCTCA	1080
GAAGAAGGCC GTTGCCCTTA TCCCTGGTGC AGCCTTTGGA CGTTACGGGG AAGGCTACGT	1140
CCGCCTATCT TATGCAGCCA GCATGGAGAC TATCAAAGAA GCCATGAAAC GACTTGAGGA	1200
GTACATGAGA GAAGCATGAT TCAGTCTATC ACGAGTCAAG GCTTGGTGCT TTACAATCGC	1260
AATTTTCGTG AGGATGACAA GCTCGTCAA ATTTTACAG AGCAGGTTGG CAAACGCATG	1320
TTTTTTGTCA AACACGCTGG TCAGTCTAAG CTGGCGCCTG TTATTCAGCC CTTGGTGCTG	1380
GCACGATTTT TCTTGCGAAT CAATGATGAC GGA CTGAGT ACATCGAAGA CTATCATGAG	1440
GTCATGACTT TCCCCAAGAT TAATAGTGAC CTCCTTGTC TGGCCTATGC GACCTATGTG	1500
GCAGCTCTTG CAGATGCTAG TTTGCAGGAC AATCAGCAGG ATGCTCCCTT GTTTGCTTTT	1560
TTGCAAAAGA CTTTGAGGTT GATGGAAGCA GGCTTGGATT ATCAGGTTTT GACCAATATT	1620
TTTGAAATTC AAATTTTGAC TCGATTTGGA ATCAGCCTCA ATTTTAATGA GTGTGTCTTC	1680
TGCCATCGGG TTGGTCAGGC TTTTGACTTT TCTTTCAAAT ATGGAGCCTG CCTCTGTCCA	1740
GAGCATTATC ATGAGGATAA GAGACGTTGT CATCTCAATC CCAATATCCC CTATCTGCTC	1800

		662	
AATCAATTTC	AAGCTATTGA	TTTGTGAGACT	TTGGAGACCA
AAATCAAAAGA	AATTTATTGA	TTCCCTAGCA	GACTGGGGAC
AAATGAAAAA	AATCGCAGTA	GATGCCATGG	GGGGCGATTA
AGGGTGTCAA	TCAAGCCCTA	TCTGACTTTT	CAGATATCGA
AAGCTAAAAT	CAAGCAATAT	CTGACAGCGA	CAGAGCGCGT
AGAAGATTGA	TTCGGATGAT	GAACCTACGA	GAGCTATTTC
TGGTATTGGC	AGCCAAGGCT	GTCAAAGATG	GTGAAGCAGA
ATACAGGTGC	CTTGTGTGCA	GCAGGATTCT	TCATCGTGGG
GTCTTGGACT	CATGTCTACC	TTGCCTACCG	TTGATGGAAA
TTGGTGCCAA	TGCAGAAAAT	ACAGCCCAGC	ACCTCCATCA
TCTATGCTAA	AAATGTCCGT	GGCATTGCGC	AACCACCGGT
CAGAGAGTAG	CAAGGGCGAC	CCGCTTCGTA	AGGAACTTA
AAAGTTTGAA	CTTTATCGGA	AACGTGGAAG	CGCGTGATTT
TTGTTGTGGC	AGATGGTTTC	ACGGGAAACG	CTGTGCTCAA
TGGGAATCAT	GGGCTTGCTC	AAGACAGCTA	TTACAGGTGG
GTGCCCTCCT	TCTCAAGGAC	AGCCTCAGTG	GTTTGAAGAA
TTGGTGAGC	GGTCTGTGTT	GGTGTTAAGG	CACCTGTTGT
ATGCCAAGGC	TGTTTATAGT	ACGATTTCGT	AGATCCGTAC
TTGCCCAGAC	TGCGCGTGAA	TTTTCAGGAG	AATAAAAGAG
TGACCGTATT	GTGACCATTA	TCCAAGAGCG	ACAGGGAGAG
CTTGAGTCTG	AAAGACGATT	TGGATGCCGA	TTCTGTTGAC
TCTGGAAGAT	GAATTTAGTA	TCGAAATCAG	CGATGAAGAA
AGGAGATGTG	GTTAAATCA	TTCAAGGAAA	ATAGCAATCG
TAGATGGTTT	TTAGAAATGA	GAAATATCGG	ACAAGCTGGT
TTATCAAGGG	CTCATGAAGA	TATATCCTCA	AGCACAACT
CAAGCCGCTA	ACAGTTGAAG	ATAAGCCTG	TAATCATGCG
GGTTGAGAAT	ATCTTTGCCA	AAGTAAAAAC	GTTTAAATG
TCATCGTAAA	CGCTTCGGAT	TACGAATGAA	TTTGATTGCT
AGGATTCTAG	TTTTCAGGA	AGTCTAATAG	TAAAAAGTG

1860
1920
1980
2040
2100
2160
2220
2280
2340
2400
2460
2520
2580
2640
2700
2760
2820
2880
2940
3000
3060
3120
3180
3240
3300
3360
3420
3480
3540
3600

663

AAAATAGAGA TGATTTTGAA ACAAAAAAGC TAATTCAAGA CGTTTCGATG CCAATTCAAG	3660
ATTTGGATGA AAAAAATTAA TAGATACTGT TATACTAAAC TTGTCAAGTT TGTAACAAGA	3720
CAAATATTAA AAATAAAAAA GAGGTATTCTG TTATGAATAC AAAAACGATG TCACAATTG	3780
AAATTATGGA TACTGAGATG CTTGCTTGCG TTGAAGGTGG CGGATGCAAT TGGGGAGATT	3840
TTGCCAAAGC AGGTGTTGGA GGAGGAGCAG CACGAGGTCT TCAGCTAGGA ATTAAAACAA	3900
GAACATGGCA AGGTGCAGCA ACTGGTGCTG TGGGAGGAGC TATACTTGGA GGTGTGGCCT	3960
ATGCAGCGAC ATGTTGGTGG TAATTATGGA TTTTAAAAGT TTTATTATTG GTTTAGTAGT	4020
TGGTATATTT GGTCTTATA TGGATGATT AATTAGAAAA AAATTTTAA AGTCTTCGGA	4080
GAAGAAAACA GAAAAATCTG TTAAAAATA ATCAAACTA TAAATGATGA ATCTGAATCA	4140
AAATTATTTT GCGCATGTAA AGAGGAGTCT TATAGTAACG AGTCAAAAAA GGAGTAACTA	4200
TGAATCGTAA TTTAGAACGG TGTATCTAT TCTGACTAGG AATAGATCAT ACCAGAGGTA	4260
GCTTAGAAAT AGCAGAGACA TTAGAAATTG AAGTAATAAA TAGGATGTCG TAAGTGTTAC	4320
TATCAATGAT TTATTTGTTT CAAGCTTGCC TAGGGTGACA GTAAAAATC AATTCCTTT	4380
CAATAGCATA TTTTATAGTG GCAGGACTCT TGTCTGCCT ATTTTMTTAT CCAAAAAGTG	4440
CAGTTGGGAG GGAGATAGGC TCATTGTTGGA AGGAAGTCCA GTTTTGTGTT AGTGATTGGG	4500
GTAAGATAGT TGTATCAGA TGAGTTAATA CTCTCGAAA ATCAAATTCA AACCACGTCA	4560
ACGTCGCCTT GCCGTATATA TGTGACTGAC TTCGTCAGTC CTATCTACAA CCTCAAAACA	4620
GTGTTTGTAG CAGCCTACGG CTAGTTTCTT AGTTTGCTCT TTGATTTTCA TTGAGTATTA	4680
GGGAAAAGGA GATGAATATG AAATTTGGGA AACGTCATTA TCGTCCGCAG GTGGATCAGA	4740
TGGACTGCGG TGTAGCTTCA TTAGCCATGG TTTTGGCTA CTATGGTAGT TATTATTTT	4800
TGGCTCACTT GCGAGAATTG GCTAAGACGA CCATGGATGG GACGACGGCT TTGGGCTTGG	4860
TCAAGGTGGC AGAGGAGATT GGTTTTGAGA CGCGAGCCAT TAAGGCAGAT ATGACGCTTT	4920
TTGACTTGCC GGATTTAACT TTTCCTTTTG TTGCCCATGT GCTTAAGGAA GGGAAATTGC	4980
TCCACTACTA TGTGGTGACT GGGCAGGATA AGGATAGCAT TCATATTGCC GATCCAGATC	5040
CCGGGGTGAA GTTGACTAAA CTGCCACGTG AGCGTTTGA GGAAGAATGG ACAGGAGTGA	5100
CTCTTTTAT GGCACCTAGT CCAGACTATA AGCCTCATAA GGAACAAAAA AATGGTCTGC	5160
TCTCTTTAT CCCTATATTA GTGAAGCAGC GTGGCTTGAT TGCCAATATC GTTTTGGCAA	5220
CACTCTTGGT AACCGTGATT AACATTGTGG GTTCTTATTA TCTGCAGTCT ATCATTGATA	5280
CCTATGTGCC AGATCAGATG CGTTCGACAC TAGGGATTAT TTCTATTGGG CTAGTCATCG	5340

664
TCTACATCTT CCAGCAAATC TTGTCTTACG CTCAGGAGTA TCTCTTGCTT GTTTTGGGGC 5400
AACGCTTGTC GATTGACGTG ATTTTGTCCT ATATCAAGCA TGTMTTTCAC CTCCTTATGT 5460
CCTTCTTTGC GACACGCAGG ACAGGGGAGA TCGTGTCTCG TTTTACAGAT GCTAACAGTA 5520
TCATCGATGC GCTGGCTTCG ACCATCCTTT CGATTTTCCT AGATGTGTCA ACGGTTGTCA 5580
TTATTTCCCT TGTTCATTT TCACAAAATA CCAATCTCTT TTTCATGACT TTATTGGCGC 5640
TTCTTATCTA CACAGTGATT ATCTTTGCCT TTATGAAGCC GTTTGAAAAG ATGAATCGGG 5700
ATACCATGGA AGCCAATGCG GTTCTGTCTT CTCTATCAT TGAGGACATC AACGGTATTG 5760
AGACTATCAA GTCCTTGACC AGTGAAGTC AGCGTTACCA AAAAATTGAC AAGGAATTTG 5820
TGGATTATCT GAAGAAATCC TTTACCTATA GTCGAGCAGA GAGTCAGCAA AAGGCTCTGA 5880
AAAAGGTTGC CCATCTCTTG CTTAATGTG GCATTCTCTG GATGGGGGCT GTTCTGGTCA 5940
TGGATGGCAA GATGAGTTTG GGGCAGTTGA TTACCTATAA TACCTTGCTG GTTTACTTTA 6000
CTAATCCTTT GGAAAATATC ATCAATCTGC AAACCAAGCT TCAGACAGCG CAGGTTGCCA 6060
ATAACCGTCT AAATGAAGTG TATCTAGTAG CTCTGAGTT TGAGGAGAAG AAAACAGTTG 6120
AGGATTTGAG CTTGATGAAG GGAGATATGA CCTTCAAGCA GGTTCAATTAC AAGTATGGCT 6180
ATGGTCGAGA TGTCTTATCG GATATCAATT TAACCGTTCC CCAAGGGTCT AAGGTGGCTT 6240
TTGTGGGGAT TTCAGGGTCA GGTAAGACGA CTTTGGCCAA GATGATGGTT AATTTTACG 6300
ACCCAAGTCA AGGGGAGATT AGTCTGGGTA GTGTCAATCT CAATCAGATT GATAAAAAAG 6360
CCCTGCGCCA GTACATCAAC TATCTGTCTC AACAGCCCTA TGTCTTTAAC GGAACGATT 6420
TGGAGAATCT TCTTTTGGGA GCCAAGGAGG GGACGACACA GGAAGATATC TTACGGGCGG 6480
TCGAATTGGC AGAGATTCTGA GAGGATATCG AGCGCATGCC ACTGAATTAC CAGACAGAAT 6540
TGACTTCGGA TGGGGCAGGG ATTTAGGTG GTCAACGTCA GAGAATCGCT TTGGCGCGTG 6600
CTCTCTTGAC AGATGCGCCG GTCTTGATTT TGGATGAGG GACTAGCAGT TTGGATATTT 6660
TGACAGAGAA GCGGATGTG GATAATCTCA TTGCTTTGGA CAAGACCTTG ATTTTCATTG 6720
CTCACCCTT GACTATTGCT GAGCGGACAG AGAAGGTAGT TGTCTTGAT CAGGGCAAGA 6780
TTGTGGAAGA AGGAAAGCAT GCTGATTTGC TTGCACAGGG TGGCTTTTAC GCCCATTTGG 6840
TCAATAGCTA GAAAGAGGAG AGGATGAAAC CAGAATTTT AGAAAGTGCG GAGTTTATA 6900
ATCGTCGTTA CCATAATTT TCCAGTAGTG TGATTGTACC CATGGCCCTT CTGCTTGTGT 6960
TTTACTTGG CTTTGCACT GTTGCAGAGA AGGAGATGAG TTTGTCCACT AGAGCTACTG 7020
TCGAACCTAG TCGTATCCTT GCAAATATCC AGTCAACTAG CAACAATCGT ATTCTTGTCA 7080
ATCATTTGGA AGAAAATAAG CTGGTTAAGA AGGGGATCT TTTGGTTCAA TACCAAGAAG 7140

665

GGGCAGAGGG TGTCCAAGCG GAGTCCTATG CCAGTCAGTT GGACATGCTA AAGGATCAAA	7200
AAAAGCAATT GGAGTATCTG CAAAAGAGCC TGCAAGAAGG GGAGAACCAC TTTCCAGAGG	7260
AGGATAAGTT TGGCTACCAA GCCACCTTTC GCGACTACAT CAGTCAAGCA GGCAGTCTTA	7320
GGGCTAGTAC ATCGCAACAA AATGAGACCA TCGCGTCCCA GAATGCAGCA GCTAGCCAAA	7380
CCCAAGCCGA AATCGGCAAC CTCATCAGTC AAACAGAGGC TAAAAATTCGC GATTACCAGA	7440
CAGCTAAGTC AGCTATTGAA ACAGGTGCTT CCTTGGCCGG TCAGAATCTA GCCTACTCTC	7500
TTTACCAGTC CTACAAGTCT CAGGGCGAGG AAAATCCCCA AACTAAGGTT CAGGCAGTTG	7560
CACAGGTGA AGCACAGATT TCTCAGTTAG AATCTAGTCT TGCTACTTAC CGTGTCCAGT	7620
ATGCAGGTTT AGGTACCCAG CAAGCCTATG CGTCAGGGTT AAGCAGTCAA TTGGAATCCC	7680
TTAAATCCCA ACACTTGGCA AAGGTTGGTC AGGAATTGAC CCTTCTAGCC CAGAAAATTT	7740
TGGAGGCAGA GTCAGGTAAG AAGGTACAGG GAAATCTTTT AGACAAGGGG AAAGTTACGG	7800
CGAGTGAGGA TGGGGTGCTT CATCTTAATC CTGAGACCAG TGATTCTAGC ATGTTGCAG	7860
AAGGTGCCCT ACTAGCCCAA CTTTATCCAT CTTTGGAAAG AGAAGGGAAA GCCAACTCA	7920
CAGCTTATCT AAGTTCAAAA TATGTAGCAA GAATCAAGGT CGGTGATTCT GTTCGCTATA	7980
CTACGACTCA TGATGCCGGG AATCAACTTT TCCTAGATTG TACTATTACA AGTATTGATG	8040
CGACAGCTAC TAAGACTGAG AAAGGGAATT TCTTTAAAT CGAGGCGGAG ACTAATCTAA	8100
CTTCGGAGCA GGCTGAAAAA CTTAGGTACG GGGTGAAGG CCGCTGCAG ATGATTACGG	8160
GCAAGAAAAG TTACCTACGT TATTATTTGG ATCAATTTTT GAACAAAGAG TAATGTTCGT	8220
GTTTTTAGAG TTAAATAATT TTTAACTGT GAGAAAGATT CTTCTTGCAG TTTTTTCTTT	8280
ACAATTTTTG AAAAACATCT ACTATTTATT CGTTAAATT CTTGTGTTTT TTGGTTTTTT	8340
GTGGTAAAT GTGCTCAAGT AATACGAAAG GCGAACTTTA AAATGTCAAA ACAATTGATC	8400
TATTCGGGAA AAGCTAAAGA TATCTATACA ACTGAGGATG AAAATCTTAT TATTTCAACT	8460
TACAAGGACC AGGCGACTGC TTTCAACGGT GTCAAGAAGG AGCAGATTGC AGGTAAGGGA	8520
GTCTTGAATA ATCAGATCTC ATCTTTTATT TTTGAGAAAT TAAATGTGGC TGGTGTGGCG	8580
ACTCACTTTG TGGAGAACT TTCAGACAGG GAACAACTCA ATAAAAAGGT TAAGATTATT	8640
CCTTTGGAAG TCGTGCTCCG CAACTATACT GCTGGTTCCT TTTCAAAACG TTTTGGTGTG	8700
GATGAGGGAA TCGCCTTGGA GACTCCGATT GTCGAATTTT ACTACAAAAA TGATGATTTG	8760
GATGATCCAT TTATCAATGA TGAGCATGTG AAATTCCTAC AGATTGCGGG TGACCAGCAG	8820
ATTGCCTACT TGAAGGAAGA AACGCGTCGT ATCAATGAAC TATTGAAAGT CTGGTTTGCT	8880

666

GAGATTGGGC TTAAATTGAT TGACTTTAAG CTAGAGTTCG GTTTTGACAA GGATGGCAAG	8940
ATTATCTTGG CAGACGAATT TTCACCAGAT AACTGCCGCT TGTGGGACGC TGATGGCAAC	9000
CACATGGATA AGGATGTTTT CCGTAGAGGA TTGGGAGAAC TAACCGACGT TTATGAGATT	9060
GT TTGGGAAA AGTTGCAGGA ATTGAAATAA TCTGTTTGCA ACGGAAAACC TTCGTCTCTC	9120
AACTAAAAGG ACTCAGGCTG AAAAGGTCCC CCAGACCTTT TCACTCTGTA GAGAAGTAGG	9180
TGAACTAACA GATGTTTACG AAATTGTCTG GGAAAAGTTG CAGGGTTTAA AATAACAACC	9240
TCAAGGCTGT TTGGGAATAT TGCAAGAGCT GAAATAAAGG AATAAGAATT GATGGATAAA	9300
CGTATTTTTG TTGAAAAAAA GGCTGATTTT CAGGTCAAGT CAGAGAGTTT GGT TAGAGAG	9360
CTCCAGCACA ACTTGGGACT GTCAAGCTTG AAAAGTATTC GTATTGTGCA AGTATATGAT	9420
GTATTTGACT TGGCTGAGGA CTGTTTGCA CCTGCAGAGA AGCACATTTT CTCTGAGCAG	9480
GTAACCGACC ATGTTT TAGA TGAAGTATCT GTGCAGGCGG ATCTTGCTAA CTATGCTTTC	9540
TTTGCCATTG AAAGTCTGCC AGGGCAGTTT GACCAGCGTG CAGCTTCGTC ACAGGAAGCC	9600
TTGCTTTTGT TGGGAAGTTC GAGTGACGTG ACAGTCAACA CAGCCCAACT TTA CTGGTG	9660
AATAAAGATA TTGATGCGAC TGAGTTGGAA GCTGTCAAAA ACTACCTGCT CAATCCAGTT	9720
GATTCTCGTT TCAAGGATAT CACGACAGGG ATTGCCAAGC AGGAGTTTTC AGAGTCAGAC	9780
AAGACCATT CCAAATTGAC TTTCTTTGAA AGCTATGCAG CAGAAGACTT TGCTCGCTAC	9840
AAGGCCGAAC AAGGGATGGC CATGGAAGTG GATGATTTGC TCTTTATCCA AGACTACTTT	9900
AAGTCAATCG GCGCGTGCC AACTGAGACT GAACTCAAGG TTTTGACAC TTA CTGGTCT	9960
GACCACTGCC GTCATACGAC TTTTGAGACA GAGTTGAAAC ACATCGACTT TTCAGCTTCT	10020
AAATTTCAAA AGCAATTGCA GTCAACCTAT GACAAGTATA TTGCCATGCG CGAGGAATTA	10080
GGTCGGTCTG AAAAACCACA AACCTTGATG GATATGGCGA CTATTTTCGG TCGTTATGAG	10140
CGTGCTAATG GACGATTGGA TGATATGGAA GTCTCTGACG AAATCAATGC CTGCTCAGTT	10200
GAAATTGAAG TGGACGTTGA TGGTGTCAAG GAACCTTGGC TCCTCATGTT TAAAAACGAA	10260
ACCCACAACC ATCCAACAGA AATTGAGCCA TTTGGTGGAG CGGCTACCTG TATTGGTGGGA	10320
GCTATTCGTG ATCCGTTGTC AGGCCGTTCC TATGTTTACC AAGCCATGCG TATTT CAGGT	10380
GCTGGTGATA TTACAGCACC GATTTTCGAA ACTCGCGCTG GGAAATTGCC ACAACAAGTC	10440
ATTTCTAAAA CAGCAGCTCA TGTTTATCT TCATATGGTA ACCAGATTGG GCTTGCAACA	10500
ACCTACGTTT GTGAATACTT CCACCCAGGC TTTGTAGCTA AACGTATGGA ACTTGGTGCC	10560
GTGTTGGTG CGACTCCCAA GGGCAATGTT GTCCGTGAAA AACCTGAAGC AGGTGATGTG	10620
ATCATCCTTC TCGGAGGCAA AACAGGTCGT GATGGTGTG GTGGTGCGAC GGGCTCTTCT	10680

667

AAGGTTCAAA CAGTTGAGTC TGTAGAGACT GCTGGTGCTG AGGTTCAAAA AGGAAATGCC	10740
ATCGAAGAAC GCAAGATTCA GCGCCTCTTC CGTAATGGCA ATGTCACTCG TCTGATCAAG	10800
AAGTCCAATG ACTTTGGGGC AGGCGGTGTC TGTGTGGCTA TCGGTGAATT GGCAGACGGT	10860
CTTGAAATCG ACCTCAACAA GGTGCCTCTT AAATACCAGG GCTTGAATGG TACAGAAATT	10920
GCCATCTCTG AATCACAAGA ACGGATGGCG GTCGTGGTTC GTCCTGAAGA TGTGGATGCC	10980
TTCTGTGCCG AATGTAACAA AGAAAAATAT GATGCTGTTG TGGTGGCGAC AGTAACTGAA	11040
AAACCAAATC TTGTCATGCA CTGGAATGGT GAGACAATCG TTGACTTGGA GCGTCGTTTC	11100
CTTGACACCA ATGGTGTGCG CGTGGTTGTC GATGCCAAAG TTGTGGACAA GGATGTCAAA	11160
CTCCCAGAAG AGCGTCAAAC ATCTGCTGAA ACACTGGAAT CAGATACCCT TACGGTTCTA	11220
TCTGACCTCA ACCATGCAAG TCAAAAAGGA TTACAGACTA TCTTTGACTG CTCTGTTGGA	11280
CGCTCAACGG TTAATCACCC ACTTGGTGGT CGTTACCAAC TCACACCAAC TGAGGCATCT	11340
GTGCAGAAAT TGCCAGTTCA ACACGGTGTG ACTCATACTG CGTCGGTCAT TGCTCAAGGT	11400
TTCAACCCAT ATGTAGCTGA ATGGTCTCCA TACCACGGTG CTGCTTATGC GGTTCATCGAA	11460
GCAACTGCTC GTTTGGTGGC TGCTGGTGCC AACTGGTTCA AGGCTCGTTT CTCTTACCAA	11520
GAGTATTTTC AGCGTATGGA TAAACAAGCA GAGCGTTTCG GTCAGCCAGT AGCTGCTCTT	11580
CTAGGTTCTA TTGAAGCACA AATTTCAGCTT GGCTTGCCAT CTATCGGTGG TAAGGACTCC	11640
ATGTCTGGTA CCTTTGAAGA ATTGACCGTT CCGCCAACCT TGGCTGCCTT TGGGGTGACG	11700
ACGGCAGATA GCCGTAAGGT GCTCTCTCCA GAATTTAAAG CTGTTGGGGA AAATATCTAC	11760
TACATCCCAG GTCAAGCCCT CTCTGCAGAG ATTGATTTTG ACTTGATTAA GAAAAATTTT	11820
GCTCAGTTTG AAGCCATCCA AGCTGACCAT AAAGTGACAT CTGCATCAGC TGTCAAATAC	11880
GGTGGTGTAG TTGAAAGTTT GGCTCTTGCT ACCTTTGGAA ACTATATTGG TGCAGAGGTG	11940
ACCTTGCTTG AACTTGAAAC AGCTTTGACA GCTCAATTAG GCGGCTTTGT CTTACATCT	12000
CCTGAAGAAA TTGCTGGAGT AGAGAAGGTT GGACAAACGA AAGCAGACTT TACACTGACT	12060
GTCAACGGTG TGAAGCTAGA TGGACACAAG CTTGACAGTG CATTTCAAGG GACATTGGAA	12120
GAAGTTTACC CAACAGAATT TACCCAAGCG AAAGAAGTAG AAGAAGTACC AGCTGTGGCA	12180
TCAGATGTTG TGATTAAAGC CAAAGAAAAG GTTGAAAAC CTGTGGTTTA CATCCCAGTC	12240
TTTCCAGGAA CCAACTCAGA ATATGATTCA GCTAAGGCCT TCGAAAAAGA AGGTGCAGAG	12300
GTCAATTTGG TGCCATTTCG GACCTTGAAT GAAGAAGCTA TTGTCAAGTC AGTTGAAACT	12360
ATGGTTGACA ATATCGACAA GACTAATATT CTCTTCTTTG CTGGTGGATT CTCGGCTGCG	12420

668

GATGAACCAG ATGGTTCAGC TAAGTTTATC GTCAATATCC TGCTTAATGA AAAAGTGCCT	12480
GTGGCTATTG ATAGCTTTAT CGCCCGTGGT GGTTTGATTA TCGGTATTTG TAATGGATTTC	12540
CAAGCCTTAG TCAAATCGGG TCTCCTACCC TACGGAAACT TTGAAGCTGC TAACAGTACT	12600
AGCCCAACCC TCTTCTACAA TGATGCCAAC CAACACGTGG CCAAGATGGT GGAAACTCGC	12660
ATTGCCAATA CCAACTCACC ATGGTTGGTT GGTGTGCAAG TGGGCGATAT CCACGCTATT	12720
CCTGTTTCGC ACGGTGAAGG GAAGTTTGTG GTGACGGCTG AGGAATTTGC AGAGCTCCGT	12780
GACAAATGGAC AAATTTTCAG CCAATACGTT GACTTTAACG GTAAACCAAG TATGGATTCT	12840
AAGTACAATC CGAATGGTTC TGTCATGCC ATCGAAGGAA TTACCAGCAA GAATGGTCAA	12900
ATCATCGGTA AGATGGGCCA CTCAGAACGT TATGAGGATG GTCTTTTCCA AAATATCCCA	12960
GGCAATAAAG ACCAACACCT GTTCGCATCA GCGGTTAAAC ATTTCACTGG AAAATAAGAC	13020
TTACAGATTT TCTAATAGAT AGTATCAGTA ATGTAAAAGT CATGTAAATC TAGCTCTTGA	13080
TGATTACAAA TGAAATTAG GTATAAAAA TGACATACGA AGTAAATCT CTTAATGAAG	13140
AATGTGGTGT TTTCGGTATT TGGGGACATC CAGATGCTGC TAAGTTGACC TATTTTGGAC	13200
TCCACAGTCT TCAACACCGT GGTCAAGAGG GGGCAGGAAT CCTCTCCAAT GATCAAGGAC	13260
AACTGAAGCG CCATCGTGAC ATGGGGCTTT TATCAGAAGT TTTCAGAAAT CCAGCTAATT	13320
TGGATAAATT GACAGGAGCT GGTGCGATTG GGCATGTGCG TTATGCGACT GCTGGCGAAG	13380
CTTCTGTAGA TAACATCCAG CCCTTCCTCT TCCGTTTCA CGATATGCAG TTTGGTTTGG	13440
CTCATAATGG AAATCTGACC AATGCAGCCT CTCTCAAGAA AGAACTGGAA CAAAGAGGAG	13500
CAATTTTCAG CGCGACTTCG GACTCTGAAA TCTTGGCTCA CCTCATTCGT CGCAGTCATA	13560
ATCCTAGCCT GATGGGCAA ATCAAGGAAG CGCTCAGCCT TGTCAAAGGT GGTTTTGCCT	13620
ATATCTTGCT GTTTGAGGAC AAGTTGATTG CGGCTCTTGA CCCAAATGGA TTCCGACCGC	13680
TTTCGATTGG TAAAATGGCT AATGAGCAG TTGTTGTATC TTCTGAAACC TGTGCTTTTG	13740
AGGTCATTGG TGCCGAGTGG ATTCGTGATT TGAAGCCAGG TGAGATTGTG ATCATTGATG	13800
ACGAGGGCAT TCAGTATGAC AGCTATACAG ATGATACCCA GTTGGCGGTT TGTTCATATG	13860
AGTATATCTA CTTTGCTCGC CCTGATTCTA ATATCCACGG TGTCAATGTC CATACGGCAC	13920
GTAAGAGAAT GGGAGCGCAA TTGGCGCGAG AATTTAAGCA TGAGGCAGAT ATTGTAGTTG	13980
GTGTGCCCAA TTCTTCCTA AGCGCGGCTA TGGGATTTGC GGAAGAATCA GGCTTACCAA	14040
ATGAAATGGG TCTGATCAAA AACCAATACA CCCAGCGAAC TTTTATCCAA CCGACTCAAG	14100
AATTGCGGGA GCAAGGAGTG CGGATGAAAC TGTCTGCTGT TTCGGGTGTT GTCAAAGGCA	14160
AACGTGTGGT CATGGTGGAT GATTCCATTG TACGTGGAAC AACCTCTCGT CGTATCGTTC	14220

669

AGCTCTTGAA AGAAGCGGGT GCGACTGAGG TTCACGTTGC CATTGGAAGT CCTGCACTAG	14280
CGTATCCATG TTTCTACGGG ATTGATATCC AGACCCGTCA GGAGCTGATT GCAGCCAATC	14340
ATACGGTCGA AGAACTCGC CAAATCATTG GTGCGGACAG TCTGACTTAT CTTTCAATTG	14400
ATGGCTTGAT TGAGTCGATT GGTATCGAAA CAGATGCGCC GAACGGTGGT CTCTGTGTCTG	14460
CTTACTTTGA CGGTGACTAC CCAACGCCTC TTTATGACTA CGAAGAAGAC TATCGTAGAA	14520
GTTTGGAAGA AAAGACCAGT TTTTACAAGT AGGCGACAGA TTCTCCATTA AAGAAAAGGA	14580
AAAAATAAAT GACAAATAAA AATGCATATG CCTCACGTCT CACTACTGAC TAAAGGCTTA	14640
AGCATTTAGT CAGTAGACGC TTTGTCCTAT AGGATCAAAG CTAGAGCCCT CACTAGTATT	14700
TTTAGATAAA AAGATGGTTT ATCTAAAAAT ACGTCGCAGT CTTTCTCAAA AAAAGAAAAG	14760
GAAAAATAAA ATGGCAAATA AAAATGCGTA CGCTCAATCT GGTGTGGATG TTGAAGCGGG	14820
TTATGAAGTT GTTGAACGGA TTA AAAAGCA CGTGGCCCGT ACGGAGCGTG CAGGTGTCAT	14880
GGGAGCTCTT GGTGGCTTTG GTGGTATGTT TGACCTTTCC AAGACTGGGG TTAAAGAACC	14940
CGTCTTGATT TCAGGGACTG ACGGTGTCGG AACCAAGCTC ATGTTGGCTA TCAAGTACGA	15000
CAAGCACGAT ACCATCGGGC AGGACTGTGT GGCCATGTGT GTCAACGACA TCATTGTCTG	15060
AGGTGCGGAA CCCCTCTATT TTCTCGACTA CGTAGCGACA GGAAGAATG AACCAGCTAA	15120
GCTAGAACAA GTGGTTGCTG GTGTGGCAGA AGGTTGTGTG CAGGCTGGTG CTGCCCTCAT	15180
CGGTGGGGAA ACGGCTGAAA TGCCGGGCAT GTACGGCGAA GACGACTATG ACTTGGCTGG	15240
TTTTGCGGTC GGTGTGGCTG AAAATCTCA AATCATTGAC GGTCAAAGG TGGTAGAGGG	15300
AGATGTTCTT CTCGGACTTG CTTCAAGTGG GATTCACCTA AATGGTTACT CTTTGGTTCTG	15360
TCGTGTCTTT GCGGATTACA CAGGTGAGGA AGTCCTACCA GAATTGGAAG GCAAGAACT	15420
TAAGGAAGTT CTACTTGAGC CGACTCGTAT CTATGTCAAG GCTGTCTTGC CGCTCATCAA	15480
AGAAGAGTTG GTCACCGCA TTGCCACAT CACAGGTGGT GGCTTTATCG AAAATGTCCC	15540
TCGTATGTTT GCAGATGACC TAGCTGCTGA AATTGATGAA AGTAAAGTTC CAGTGCTTCC	15600
AATTTTCAAA ACCCTTGAAA AATACGGTCA GATTAAACAC GAAGAAATGT TTGAAATCTT	15660
CAATATGGGT GTGGGACTTA TGTTGGCGGT CAGCCCTGAA AATGTAGAGC GTGTAAAGA	15720
ATTGTTGGAT GAAGCAGTCT ATGAAATTGG TCGCATCGTC AAGAAAGAAA ACGAAAGTGT	15780
CATTATCAAA TGAAAAAAT AGCGGTTTTT GCCTCTGGTA ATGGCTCAAA TTTTCAGGTG	15840
ATTGCCGAAG AATTTCCAGT GGAGTTTGTG TTTTCAGACC ATCGTGATGC CTATGTGCTT	15900
GAGCGTGCAA AGCAGCTCGG CGTTCTGTCC TATGCTTTTG AACTCAAGGA GTTTGAGAGC	15960

670

AAGGCAGACT	ACGAAGCAGC	CCTTGTCGAA	CTCTTGGGAAG	AACACCAGAT	TGACTTGGTT	16020
TGCCTAGCAG	GCTACATGAA	AATCGTTGGA	CCAACCTTAT	TGTCGGCTTA	TGAAGGTCGG	16080
ATTGTCAACA	TTTATCCAGC	CTACTTGCCA	GAATTTCCAG	GAGCTCATGG	GATTGAGGAT	16140
GCTTGGGAATG	CTGGCGTGGG	TCAGTCTGGT	GTGACCATTG	ACTGGGTGGA	TCGGGTGTG	16200
GATACAGGCC	AGGTCATCAA	ACAGGTTTCG	GTGCCACGAC	TAGCTGATGA	TACCATTGAC	16260
AGATTTGAAG	CTCGCATCCA	TGAAGCAGAG	TACAGGCTGT	ATCCGGAAGT	AGTGAAGGCT	16320
CTATTTACAG	ATTGACTTTT	TGATGATTCA	TATGATATCT	TTGATTTTAA	ATTGGAGTCA	16380
GTGTTTGTG	AAGACGGCTT	CAAACGGAGG	TATTTGTAAT	GTTAGAATCT	AAAAAACA	16440
CTCGATATGT	ATTTTATGTC	TATCTGATGT	TATTAACCTG	GGGAATCTTA	TTTAAGTTTG	16500
AAACAAATCC	TGAATTTATA	GCATTTTCT	TAGCTCCAAG	GTATATCAAT	TGGATTCCAT	16560
TTTCAGAACC	ACTAATAGTC	GATGGAAAA	TTGTTTTTGC	TGAAATGTTA	TTTAATCTGA	16620
TTTTCTTTAT	TCCATTAGGT	GTTTGTTC	CTTTGATAAA	AACTAATTTA	TCTAGTTTAA	16680
GAATAGTCGG	GACAGGTTTC	TTGATTAGTT	TATTGTTTGA	GTGCTTACAG	TATATTTTAG	16740
CAATAGGTAT	AACAGATATA	ACGGATTGGA	CTTTAAATAC	GCTAGGTGTC	TGTGTAGGCT	16800
TACTGATTTA	TCAAATTTTT	ATAAGAGTGT	TCAAATCACA	GACTAGAAAA	TGGATCAATA	16860
TCTTAGGTAT	GCTTAGCCTT	GGTTTTGCTT	ATCTTGTTTT	ACTGTTACTG	CATTTACTTA	16920
GTGTTTAACT	AATGATTAAA	AAGGAGAATA	TAATGACTAA	ACGCGTCTTA	ATCAGCGTCT	16980
CAGACAAAGC	GGGCATTGTT	GAATTTGCC	AAGAACTCAA	AAAACCTGGT	TGGGAGATTA	17040
TCTCAACAGG	TGGAACAAAG	GTTGCCCTTG	ATAATGCTGG	GGTGGATACC	ATTGCTATCG	17100
ATGATGTGAC	TGGTTTCCCA	GAAATGATGG	ACGGTCGTGT	GAAGACCCTC	CACCCAAATA	17160
TCCACGGAGG	GCTTCTCGCT	CGTCGTGACT	TGGATAGCCA	CTTGAAGCG	GCTAAGGACA	17220
ACAAGATTGA	GCTCATTGAC	CTTGTGGTGG	TCAACCTTTA	CCCATTAAAG	GAACTATCC	17280
TTAAACCAGA	TGTGACTTAT	GCTGATGCAG	TTGAAAATAT	CGATATTGGT	GGGCCATCTA	17340
TGCTTCGTTC	AGCAGCGAAA	AATCATGCCA	GTGTACAGT	TGTGGTAGAT	CCTGCTGACT	17400
ACGCTGTGGT	TTTGATGAA	TTGGCAGCAA	ACGGCGAAAC	CTCTTATGAA	ACTCGCCAAC	17460
GTTTAGCAGC	CAAAGTATTT	CGTCACACAG	CGGCTTATGA	CGCCTTGATT	GCAGAATACT	17520
TCACAGCTCA	AGTGGGTGAA	AGCAAGCCTG	AAAAACTCAC	TTTGACTTAT	GACCTCAAGC	17580
AACCAATGCG	TTACGGTGAG	AATCCTCAAC	AAGACGCGGA	CTTTTACCAG	AAAGCTTTGC	17640
CTACAGACTA	CTCCATTGCT	TCAGCCAAAC	AGCTCAACGG	GAAAGAATTG	TCATTTAATA	17700
ATATCCGTGA	TGCAGATGCT	GCTATCCGTA	TCATCCGTGA	CTTCAAAGAT	AGTCCAACCG	17760

671

TTGTGGCTCT CAAACACATG AATCCATGTG GAATTGGTCA AGCTGATGAC ATCGAGACTG	17820
CTTGGGACTA CGCTTATGAG TCTGACCCAG TGTCTATCTT TGGTGGGATT GTCGTCCTCA	17880
ACCGTGAGGT GGATGCTGCG ACAGCTGAGA AGATGCACGG CGTTTTCCCTC GAAATCATCA	17940
TTGCACCAAG CTATACGGAT GAAGCGCTAG CCATTTTGAT CAATAAAAAG AAAAAGTTGC	18000
GTATCCTTGC CTTGCCATTT AATGCTCAAG AGGCTAGCGA AGTGAAGCA GAATACACAG	18060
GTGTAGTCGG TGGACTTCTC GTGCAAAATC AAGACGTGGT CAAGGAAAGC CCAGCTGACT	18120
GGCAAGTGGT GACTAAACGT CAGCCAACTG AGACAGAAGC GACTGCTCTT GAGTTCGCTT	18180
GGAAGGCTAT CAAGTACGTC AAATCAAATG GTATTATCGT GACCAACGAC CACATGACAC	18240
TTGGTGTGG TCCAGGTCAA ACCAACCGTG TGGCTTCTGT TCGCCTTGCC ATTGACCAAG	18300
CCAAAGATCG TCTGGACGGG GCGGTCCTTG CTTGAGATGC CTTCTTCCCA TTTGCGGATA	18360
ACGTGGAAGA AATCGCCAAA GCAGGAATTA AGGCCATCAT CCAGCCCGGT GGCTCTGTCC	18420
GTGACCAAGA ATCCATCGAA GCAGCGGATA AATACGGCTT GACTATGGTC TTTACAGGTG	18480
TGAGACATTT TAGACATTAA GAAGATAAAA GGGAAGAAAA CAGTTTCTTT CCTTTTGG	18540
CTTAAATAC TAACTGAAAC AAGATTAAAA CGAATTTTTT TGATATAATG TTGGTAAATA	18600
ATTCGCAAAA GAGGTTGAGG AATGAAACTG CTTGTTGTCG GTTCTGGTGG TCGTGAGCAT	18660
GCGATTGCTA AAAAGTTACT TGAATCAAAA GACGTGGAAG AAGTCTTTGT AGCTCCTGGG	18720
AATGATGGGA TGACTCTGGA TGGTTTGGA TTGGTAAATA TCTCTATTTT CGAACATTAT	18780
AAATTGATTG ACTTCGAAA GACCAATGAT GTTGCTTGGA CCTTTATCGG TCCAGATGAT	18840
GCCCTTGCTG CTGGTATCGT GGATGATTTT AACCAAGCTG GACTTAAGGC CTTTGGTCCG	18900
ACTAGGGCTG CAGCGGAGCT GGAGTGGTCC AAGGATTTTC CCAAGGAAAT CATGGTCAAA	18960
TACGGCGTTC CGACAGCAAC ATATGGCACA TTTTCAGATT TCGAGGAAGC CAAAGCCTAT	19020
ATCGAAAAGC ATGGTGCGCC TATCGTAGTC AAGGCGGATG GCTTGGCACT TGGGAAGGGT	19080
GTCGTCGTTG CTGAGACGGT TGAGCAAGCG GTCGAAGCCG CTCATGAGAT GCTTTTGGAC	19140
AATAAATTTG GTGACTCAGG TCGCGCGGTG GTTATTGAGG AATTCTTTGA AGGAGAGGAA	19200
TTTTCACTCT TTGCCTTTGT CAATGGTGAT AAGTTCTACA TCATGCCAAC GGCTCAGGAC	19260
CACAAACGTG CCTATGATGG CGACAAAGGG CCTAACACGG GTGGTATGGG TGCCTATGCG	19320
CCAGTCCCAC ACTTACCACA GAGTGTAGTT GATACAGCGG TTGACACCAT TGTCAAGCCA	19380
GTCTAGAAG GGGTGATTAA AGAAGGTCGC CCTTATCTGG GAGTTCTTTA CGCAGGGCTT	19440
ATCCTGACAG CTGATGGACC GAAAGTCATT GAGTCAACG CTCGGTTTCG AGATCCAGAA	19500

672

ACTCAGATTA TCTTGCCTCG CTTGACCTCT GACTTTGCTC AAAATATCAC AGATATCCTG	19560
GATAGCAAGG AGCCAAATAT CATGTGGACG GACAAGGGTG TGA CTCTGGG TGTGGTTGTC	19620
GCATCCAAGG GCTACCCGCT AGACTATGAA AGGGGCGTTG AGTTGCCAGC CAAGACAGAA	19680
GGCGATGTCA TCACCTACTA TGCAGGGGCT AAGTTTGCGG AAAATAGCAG AGCACTGCTC	19740
TCAAACGGCG GACGAGTTTA TATGCTCGTT ACCACAGCAG ATACCGTCAA AGAAGCCCAA	19800
GCCAGCATAT ACCAAGAACT ATACCAACAA AAAATAGAAG GACTCTTCTA CCGAACAGAT	19860
ATCGGAAGCA AGGCAATTAA GTAAAGATAT AAGAATAACG CGCCGTAGTC GCCAAACACG	19920
ATAATGGTCG TCGTGGTGAA AAGACCAGAA CAGTGAATGT TCTGGTCAGG GGGAACTTG	19980
GAGACCTTAG GCTCAAAGTT TAGGAATGAA ACCGAAGGTT TGCTTCCGCC TCCATCACCT	20040
AAGACCATTA TCAAAAAGAA AAATAAAAAT TCACAAAATA CGTTAATGAT CGTATGGTTT	20100
GCGAGCGTTA GCGAGCTAAT ATAGAACAAT CACCGCCGTT GTGAAAGAAC GATTGGATGA	20160
TAATCCAATC GTTCAGGGAA ATTGGAAGAC CTTGGGTTTC CAATTTAGGC ATGAGACACC	20220
TTTGGTGGCT GCTGCCGTCC CTCACAAGCT AAGGTGATTG TTGAAAAAGA GGAAAAAGGA	20280
GAAGAAATGA AACCAGTAAT TTCCATCATC ATGGGCTCAA AATCCGACTG GGCAACCATG	20340
CAAAAAACAG CAGAAGTCCT AGACCGCTTC GGTGTAGCCT ACGAAAAGAA AGTTGTTTCC	20400
GCACACCGTA CACCAGACCT CATGTTCAAA CATGCAGAAG AAGCCCGTAG TCGTGGCATC	20460
AAGATCATCA TCGCAGGTGC TGGTGGCGCA GCGCATTTGC CAGGCATGGT AGCTGCCAAA	20520
ACAACCCTTC CAGTCATTGG TGTGCCAGTC AAGTCTCGTG CTCTTAGTGG AGTGGATTCA	20580
CTCTATTCTA TCGTTCAGAT GCCGGTGGG GTGCCTGTTG CGACCATGGC TATCGGTGAA	20640
GCTGGAGCGA CTAACGCAGC TCTCTTTGCC CTCCGTCTCC TCTCTGTAGA AGATAAGTCC	20700
ATTGCGGATG CACTTGCCAA CTTTGCTGAA GAACAAGGAA AAATCGCAGA GGAGTCGTCA	20760
AATGAGCTCA TCTAAAACAA TCGGAATTAT CGGTGGCGGT CAACTGGGTC AGATGATGGC	20820
CATTTCTGCT ATCTACATGG GCCACAAGGT TATCGCGCTG GATCCTGCGG CGGATTGCCC	20880
GGTCTCTCGT GTGGCGGAAA TCATTGTGGC ACCTTATAAC GATGTAGACG CCCTCCGTCA	20940
GTGGCAGAC CGTTGCGATG TCCTCACTTA TGAGTTTGAA AATGTCGACG CTGACGGTTT	21000
GGATGCCGTT ATCAAGGATG GACAACTCCC TCAAGGAACA GATCTGCTCC GCATTTGCGA	21060
AAATCGTATT TTTGAAAAGG ACTTTTGTG AAACAAGGCT CAAGTCACTG TGGCACCCTA	21120
CAAGGTCGTG ACTTCTAGCC TAGACTTGGC AGATATCGAC TTGTCGAAAA ACTATGTCCT	21180
CAAGACTGCG ACTGGTGGCT ACGATGGTCA TGGCAAAAAG GTTATTCGTT CAGAAGCAGA	21240
CTTGGAAGCA GCCTATGCGC TAGCAGACTC AGCAGACTGC GTCTTGGAAG AATTGTCAA	21300

673

CTTTGACCTT GAGATTTCTG TCATCGTGTC AGGAAATGGC AAGGAGGTGA CGTTTTTCCC	21360
AGTTCAGGAA AATATCCACC GCAACAATAT CCTGTCTAAG ACCATCGTAC CAGCCCGCAT	21420
TTCTGAAAGT CTAGTAGACA AGGCTAAAGC TATGGCAGTG CGAATCGCAG AACAACTCAA	21480
CTTGTCTGGA ACTCTCTGTG TGGAAATGTT TGGGACAGCT GATGACATCA TTGTCAATGA	21540
AATCGCCCCA CGACCACATA ACTCTGGGCA CTATTCCTATT GAAGCCTGTG ATTTCTCTCA	21600
GTTTGACACC CATATTCCTGG GTGTTCTCGG AGCACCATTA CCAGTCATCA AACTCCATGC	21660
GCCAGCCGTT ATGCTTAATG TCCTCGGTCA GCATGTCGAG GCTGCTGAAA AATATGTCAC	21720
AGAAAATCCA AGCGCCACCC TCCACATGTA TGGTAAAATA GAAGCAAAGC ATAATCGTAA	21780
GATGGGACAT GTGACTTTGT TTAGTGATGT GCCGGATAGT GTGGAAGAGT TTGGGGAAGG	21840
GATTGATTTT TAGGACAAGT CTATGATACA AATTATCGTT AATACATTTA TTGAAAAGTA	21900
TAAGACTGGA GCAGTTGTTG AAGTGTTGTA TGCCAGTGCT GACCAAGATA AGGTACAAGC	21960
TAAATATGAA GAACTAGCTG CACAATACCC CGAAAATTAT TTAGCTATCT ATAATGTACC	22020
GCTGGATACG GATTTGAATA CACTAGATCA TTACCCGTCT GTGTTTATTG GAAAAGAGGA	22080
GTTTGAGTAG AAATCTTGGT TTACCTAGAT AGCTTATTCC CAACAGCTTA AGAAGAAAGG	22140
AAAAATTAAC ACATGATCAA CCGTTACTCT CGCCCTGAGA TGGCGAATAT TTGGAGTGAA	22200
GAAAATAAAT ACCGTGCTTG GCTTGAGGTG GAAATCCTCT CTGACGAGGC ATGGGCTGAG	22260
TTGGGGGAAA TCCCTAAGGA AGATGTGGCT TTGATTCGCA AGAAGGCGGA CTTTGACATC	22320
GACCGTATTT TGGAAATGA GCAGGAGACG CGCCACGATG TGGTGCTTT CACGCGTGCG	22380
GTTTCTGAGA CTCTTGGTGA AGAGCGCAAG TGGGTTCAC TGGGTTAAC TTCTACTGAC	22440
GTGGTGATA CTGCTTATGG TTACCTCTAC AAGCAGGCCA ACGACATCAT CCGTCGTGAC	22500
CTTGAAAAC TCACTAATAT CATCGCTGAC AAGGCCAAGG AGCACAAGTT CACCATCATG	22560
ATGGGGCGTA CTCATGGTGT GCACGCTGAG CCGACAACCT TTGGTCTTAA ATTAGCAACT	22620
TGGTACAGCG AAATGAAACG CAATATCGAG CGCTTCGAGC ATGCGGCTGC TGGTGTAGAA	22680
GCTGGTAAGA TTTCTGGTGC GGTGCGGAAC TTTGCCAATA TCCCACCATT TGTAAGAGGAG	22740
TATGTCTGCG ATAAACTTGG CATCCGTGCC CAAGAAATCT CTACACAAGT CCTTCCTCGT	22800
GACCTTCACG CTGAGTACTT TGCGGTTCTT GCCAGCATTG CGACTTCAAT CGAACGTATG	22860
GCGACTGAGA TTCGTGGTCT AAAAAATCT GAGCAACGCG AAGTAGAAGA GTTCTTTGCT	22920
AAAGGGCAAA AAGGGTCTTC AGCAATGCCT CACAAACGCA ACCCAATCGG TTCTGAAAAAT	22980
ATGACTGGTC TGGCGCGTGT CATTCGTGGT CACATGATTA CGGCTTATGA AAACGTCGCT	23040

674

CTCTGGCATG AACGCGATAT TTCTCACTCA TCAGCTGAGC GTATCATCAC ACCAGATACG	23100
ACCATTTTGA TTGACTACAT GCTCAACCGT TTTGGAAATA TCGTCAAGAA CTTGACAGTC	23160
TTCCCAGAAA ATATGATCCG AAACATGAAC TCGACTTTTG GTCTTATCTT TAGCCAACGG	23220
GCTATGTTGA CATTGATTGA AAAAGGCATG ACCCGTGAGC AAGCCTATGA CTTGGTGCAA	23280
CAAAAACAGC CTACTCTTGG GACAACCAAG TAGACTTTAA ACCACTTCTT GAGGCAGATT	23340
CAGAAGTAAC ATCACGTCTC ACACAAGAAG AAATCGATGA AATCTTCAAC CCAGTTTATT	23400
ACACCAAACG AGTGGATGAT ATCTTTGAAC GTCTTGGACT AGGTGATTAA TTAATAAATA	23460
AACAGCGAGC TTCAATCTCG CTGTTTATTT TTTATCGAAA AGACTTAGTC TTCTTTTCTT	23520
TTAGTGAGTC CATAGGCTGC TAGTGTGGAC ATGAGTCCTG CGACTACTAG TCCTGCAGAA	23580
TCGTGAGTTC CTGTTTCAGG AAGTTTTTTC TCTGTTACCA CAGGAGCTGG ATCTTGAGGA	23640
AGAACTTTGC TTTCCTCAGC AGGAGCAGTT GATGGAGCTG GTTGGCTTGG GATTTCTAGT	23700
TTTGGTTTTT CTTCAGCAAT AGCGGCTTGT CCGTTTTTCAT CGCCTACATG TGTACCATA	23760
GTTCGCACTT CGACTATTTG AGTAACGGCT TCCTGTGCTA CGACACTATT TACAAGTGTT	23820
TTCACTTCCT TACCATCGGC AGAAGTGCTC ACAGAGTAGA AGTTGCTACG ATGTCCATTG	23880
ACGCCCTTAG TAATGACTTG TGTTTTTCCT TTGAGTAAGA GTGGATTTTC ACAAGTCACT	23940
GTGGTAAATG GAATTTCTTC TTCTTGATA TCCAGTCTAG GTTTTACCTC AGTAGTTGGT	24000
GCAAGACCAC TTTCATCACC CTTGTGAGTT ACAGGAGCGC CAACTTCAAC CACTTGGTTT	24060
ATAACTTCTT TGGTTACCTG GCTATCAAGG ACTGTTTCTG TTGTTTTTCC ATTTTCAGTG	24120
AGTACAGAGA TGTAATGAGT TCGTTCACCT TTGACTCCTG CTGTGATAAT ATTTTCCTGA	24180
CCGGCTGGGA GGTTAGGATT TTCTTTCTTG ATAAGTTCAA ATGGAATTTT TTCAGTTCTT	24240
GTGATGAGTT CTGGTCTGGT TTCAACATTG GCAGCCACTT CATTTTCATC TAGGCTTCCT	24300
GAATGAGTTA CAGCTGGTTT GAGGCCTTGA AGAGCGGCTT TTAGGTTGGC TACAAGCGTG	24360
TCAAGCTCAG CTTGTTTATT ACGGTTGAGG TTGTAATTAA GAGCTGTTTT AGCTGCGTCA	24420
AGGGCCTCAA GACTTTCTTT ACTATATCCT TCTAAGTTTG TAGGAATTTT AGCTAATTCT	24480
TCGCGGAGAG CATTATAATT AGCACGAAAG TAGTCTTTGT TGTGGTCTGC AAAGGCAGTC	24540
ATGAGTTCAA AGATTTCTTC TTCCTTGAT TCAGCGCTTG GTCTATCTGC CCAGATTGAA	24600
AGCATACTTC CGACTGTTGG AAGATCTACT TCAGGATATT TGGTAGAAGC TAGTTGATTG	24660
AATGGTGTTT TTCCAGTATT CTCAATAGCT TTCTTGAGGA AACCACCACC ATCTTCTGGT	24720
TTTTGACCAA GAATGTAGTA CCAGTCACCG TTGGTATTCA AGAATTTATA GCCTTTGCTT	24780
GCTAGGTATT GAGGTGATGC GAGGTTATAT CCCACACG CTTTAGACCA GTAAGAAATC	24840

675

AAGACATCTT TGTCAAACG AACATCGTCC TTGTCTTCAT AGTAGAAGCC ATCGTTGAAG	24900
GCCATTGGTT GAAGCCCTCT TTCTTTGGCC ATAGCTGCCA GGGTGTGGC ATATTCGGCA	24960
AATTTGCCAT AGAGTTGATA CCACTTGAGG TAGTACCAGC CTTGGGCACT AGTCGCATCG	25020
TTGGCGTATT CGTCAGTACC AAAGTTGAAA ATCTTTGTTT TACCTGCAAA GAAGTCCATG	25080
TATTTACCGA TGAGGGCTTT TACAAAGTTC ATCGCTTCTT CGTTTTTCAA GTCCATAGTT	25140
·GTTTTTGAAA CTTTATCAAA GTGGGCTTGA GGATTTTAA TACCTAATTT TTCCATGGCA	25200
ACCAGCATAG CATCCATGTG ACCTGGACTG TTAATAGCTG GGATGAGACC GATGTCTTA	25260
GATTTAGCGT ATTCAATTAG CTCTGTTACT TCTGCCTGTG TTAGTGCACT ACCGTTTGGA	25320
TCGTCTAGT AAGCTTTAGT TCCTTCGATA ATAGCTTTTT TAACGTCATC ACTAGCATAG	25380
GTTTTCCGT TGGCAGTAAT GGTCATATCA TCGAGTAGAA AGCGAAGTCC GTCATTTCTT	25440
AGAAGGAGAT GGACATCAGA ATATCCGAGC TCACTGGCCT TGTCTACGAT GCGTTTGAGC	25500
TGGTTCAGAG TAAAGTATTT GCGTCCAGCA TCGATTGAGA TTACCTTGTT TTTGGCAAGT	25560
TTTTCAACCT CACGTTAGC TTCTTCTTCT TTTTGAGCTT CAGGCGTGAG GGTCAAGTTG	25620
TTGACAGTTT CTTGAAGTTT AGCAATGGCT TGATCAATCG TATCTTGTTG GGCACGGCTA	25680
AGGTTGCTAT CGAGAGAGCG AATAGCTTTT TCAGCTTCTT TTACGGCCGT GACGCTTCTT	25740
GCAGTATAAC GGTTCAGGTC TTTTGGTACC TCGTTAAGTG CTTGCTCTGC AGATTCTATA	25800
TCAGCTGCGA AGTATTCAGC GTTGGCATTT GCAAATGAC GCATGAGTTT GAAGAGGCGT	25860
GATGGTGAAT AACGTGCAGA TGGAGTGTC GCGCAAGCAG CTACCATACC ACCGATGATT	25920
GGGATATCAG CTCCTTCTGT TTTTGGTACA GAAGTGATTG GTGTGTTTTT AATACCATTG	25980
AGCCCTGAT CGAGATTGTA CCAGCCTTGG CCATCAGCGT TTCGTCCAAG AACGTAGTAC	26040
CAAGCATCAT TGGTATTAAG GATTGGTGA CCTTTTTCAG CTAGTAGTTT AGAAGAAGCG	26100
ACATCGTAGC CTCCCCAACC ACCAGTCCAC ATAGAAACGA TGATGTCTTT GTCAAAACTA	26160
CCAAAGCTTG TGTCGCTATT GTAGTAGATA CCGTCGTAA AAGCCATTGG TTTGAGACCG	26220
TGCGATTTTA CAATACGAGC GAGGTCATTG GCGTAGGCAA TAAATTTTTC ATAGCCTTTT	26280
ACAGGGTAGC CTTGTTTGG ATAGTATTTA TCAGCTTGAA GCACACTCCA ACCTTTAGCA	26340
TCTGTGCGAT CATTGGCATA TTCATCAAGT CCGATGTTGA AGATTTCACT CTTTTCGCG	26400
AAATAAGCAG CATACTTGTC GATAAGGGCT TTTGTAAAAG CGACAGCTTG TTCGTTGTCA	26460
AGATCGACAG TACGGGCTGA TTCTTCCCA AAATAGCTAA AGTTAGGGTT TTGGATTCCC	26520
AATTCTTTCA TGGCATTGAG AATCGCATCC ATGTGTCCAG GACTATTTAC TGTCGGAATG	26580

676

AGACCGATAC CTTTATCTTT GGCATAGTTA ATCAGATCTG TCATTTGACT TTCTGTTAAG	26640
TGATTGCCGT TTGGATCGTT GTAATAATCA TTTGTACCTT TTTCAATGGC GCGTTTGACA	26700
TCGTCACTGG CATAGGTCTT GCCGTTAGCT GTGATGCTCA TATCGTCCAA CATGAAACGG	26760
AGTCCATCAT TTCCGACTAA TAGGTGTAAA TCAGTGTAGC CATAATGTTT CGCTTTATCG	26820
ATGATTTCCCT TGAGCTGTTT TGGTGAGAAA TATTTACGTC CAGCATCAAT AGAAACAATT	26880
TTCTTTTTCG CTAGTTTTTC ATTTACAGTT GCAGCACGTT CCTTTCCTGC CTCTGTTGCC	26940
GGTTTGTCAG CCTCTGCTTT CGCTTCATCT TTTTTAGCTG GTTTATCCTT GTCAGTCTTG	27000
TCTGTATTG ACTCTTTAGA ATCAACCTCT TTCGCTTCTT CCTTTTTAGG GCTAGCTTCT	27060
TCTGCCTTTT TATTAGCAGT TTCTTTTCA GCAGAAGTTG GAGTTACCAC TTCTGCTTTA	27120
TCACTAGGAG TTGAACAAAC TTCCTCTGT GGTTTTTCTT CTGTTTTTGG AAGACTAGCT	27180
ACCTTATCAG TAGCTGGAGT TTCTGTTTCT ACAGTTTTTG GAGCTTCTGG TTGAAGCACT	27240
GCTTTAGGTG TTTCCTCAGT CCGATTTTCG GATGATTGAG GGAATCAGA AACCGTATGG	27300
ATGGTCGGTT GGTTTTCTGT AGTAGTAGGA GAACTCCAT CGGCTGCAAC AGTCTGTGCT	27360
TGGAAGGCAA ATCCAATTAG AACAGAACT GCTCCTACAG CGTATTTACG AATAGAAAAA	27420
CGCTGTTGTT TTTTATGTTT CATTGCAAAA CCTCCTGATT GCATTGTTAT ATTGATAGCG	27480
ATTATATAAA TCAACGCCTT TATTTTATTT CTTATATTAA TTTCTTATAT TAACGAGAGT	27540
CAAGAGGAGA TGACAAAAA CTATAATAAG TATAAAAAA TATAAAATTT AAACCTAAGA	27600
TTTCAGATTG GTCGAAAAA ATACGTATAT ATATCTAGTA TAATTTTGG TTCTATTTCT	27660
ATAAAATATT CCACAAATTA TAGAATTTT CAAAATAGG TAAGCGCTAC CTTTTGGTG	27720
TAGTATAATA AGCATAGAAA AAGCCCAAGC GATTAGCTCA GGTTTTCTTC TTAGTGATCA	27780
CGGTACATG AGATAAATTT AATCTTGTAG TAATCAGATC GTTTGTAAGT TTCACTGTAT	27840
TCTAAACTT GCCCAGTTGA TTCGAGTTG GTGATTTTAG TTTGTAGGAC AGTAGGGAAT	27900
TGTTTCATCGA CTCCGAGGAC TGAAGCTGCA TGTCTGGAG TTGGAAGAC TATTTCGTTG	27960
ATTTCTTCAA AGTGTTTATC ATTCATGTGA ATGTGGTAGT CTAACCTGAA ACGATTATAG	28020
ATAGAACTAT AGTATTCAAG GTTTGGATAA TTTGCGTTGA TATATGTTT TGGGATGTAG	28080
GATGTATGGT AGATATAAAC GACACCGTTT GATTCGCGGA TACGTTCAAT CTTGTAGTAG	28140
AATTGATCGC CGCGTAGACC CAATTTTCC AAGTAAACAA GCTTGTTCCT GCGTTCAATT	28200
GAAAGAACAG TTACCTTATC ATCTTTAGCA TTGAAGAGTT CAATATCTGA AAACCTTACA	28260
AGCTTGTGTT TGCGTGCACG TGAAACGAAG GTTCCTTTTC CTTGTTGGCG GACAATATAG	28320
CCATCTTTGG CAAGGTCGTT TAAGGCGCGA ACAACTGTGA TAGAGCTGAC ATCGTACATT	28380

677

GAAATGAGTT CTGCTTCAGT GTAAAATTTA TCTCCACTGC TAAACTGCCC AGAGATGATT 28440

TTATTTTTTA ATTCGTCTTT TATGTATTGA TGG 28473

(2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6749 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

CCTGATGGGT GGTATGCGAG GATACAGTTC TGAAAATCGC CGTTACTTAA TTAATGGACG	60
CGAAGTCACA CCTGAGGAAT TTGCTCACTA TCGTGC GACT GGTCAATTAC CAGGAAATGC	120
AGAAACTGAT GTGCAAATGC CACAACAGGC ATCAGGTATG AAACAAGGCG GTGTCCTTGC	180
AAAAGTAGGT CGAAACTTAA CAGCAGAAGC GCGTGAGGGC AAGTTGGATC CTGTTATCGG	240
ACGAAACAAG GAAATCAAG AAACATCTGA AATCCTCTCA CGCCGCACCA AGAACAATCC	300
TGTTTTGGTC GGAGATGCAG GTGTTGGTAA GACAGCAGTT GTCGAAGGTC TAGCGCAAGC	360
CATTGTGAAC GGAGATGTTT CTGCTGCTAT CAAGAACAAG GAAATTATTT CTATTGATAT	420
CTCAGGTCTT GAGGCTGGTA CTCAATACCG TGGTAGCTTT GAAGAAAATG TCCAAAACCTT	480
AGTCAATGAA GTGAAAGAAG CAGGGAATAT TATCCTCTTC TTGATGAAA TTCACCAAAT	540
TCTTGGTGCT GGTAGCACTG GTGGAGACAG TGGTTCTAAA GGAAGTTCGG ATATTCTCAA	600
GCCAGCTCTC TCTCGTGGAG AATTGACAGT GATTGGGGCA ACAACTCAAG ACGAATACCG	660
TAACACCATC TTGAAGAATG CTGCTCTTGC TCGTCGTTTC AACGAAGTGA AGGTCAATGC	720
TCCTTCGGCA GAGAATACTT TTAATAATTCT TCAAGGAATT CGTGACCTCT ATCAACAACA	780
CCACAATGTC ATCTTGCCAG ACGAAGTCTT GAAAGCAGCG GTGGATTATT CTGTTCAATA	840
CATTCCCTCAA CGTAGCTTGC CAGATAAGGC TATTGACCTT GTCGATGTAA CGGCTGCTCA	900
CTTGCGGGCT CAACATCCAG TAACAGATGT GCATGCTGTT GAACGAGAAA TCGAAACGGA	960
AAAAGACAAG CAAGAAAAAG CAGTTGAAGC AGAAGATTTT GAAGCAGCTC TAAACTATAA	1020
AACACGCATT GCAGAATTGG AAAGGAAAAT CGAAAACCAC ACAGAAGATA TGAAAGTGAC	1080
TGCAAGTGTC AACGATGTGG CTGAATCTGT GGAACGAATG ACAGGTATCC CAGTATCGCA	1140
AATGGAAGCT TCAGATATCG AACGTTTGAA AGATATGGCT CATCGCTTGC AAGACAAGGT	1200
GATTGGTCAA GATAAGGCCG TAGAAGTTGT AGCTCGTGCT ATCCGTCGTA ACCGTGCTGG	1260

678

TTTTGATGAA GGAAATCGCC CAATCGGCAA CTTCTCTCTT GTAGGGTCTA CTGGGGTTGG	1320
TAAGACGGAG CTTGCTAAGC AATTGGCACT CGATATGTTT GGAACCCAGG ATGCGATTAT	1380
CCGTTTAGAT ATGTCTGAAT ACAGTGACCG CACAGCTGTT TCTAAGCTAA TTGGTACAAC	1440
AGCAGGCTAT GTGGGTTATG ATGACAATAG CAATACCTTA ACAGAACGTG TTCGTCGCAA	1500
TCCATACTCT ATCATTTCTT TGGATGAAAT TGAAAAGGCT GACCCCTAAG TTATTACCCCT	1560
TCTCCTCCAA GTTCTAGATG ATGGTCGTTT GACAGATGGT CAAGGAAATA CAGTAAACTT	1620
CAAGAACACT GTCATTATTG CGACCTCAA TGCTGGATTT GGCTATGAAG CCAACTTGAC	1680
AGAAGATGCG GATAAACCAG AATTGATGGA CCGTTTGAAA CCCTTCTTCC GTCCAGAATT	1740
CCTCAACCGC TTTAATGCAG TCATCGAGTT CTCACACTTG ACTAAGGAAG ACCTTTCTAA	1800
GATTGTAGAT TTGATGTTGG CTGAAGTTAA CCAAACCTTG GCTAAGAAAG ACATTGACTT	1860
GGTAGTCAGT CAAGCGGCTA AAGATTATAT CACAGAAGAA GGTACGACG AAGTCATGGG	1920
GGTTCGTCCT CTCCGTCGCG TGGTTGAACA AGAAATTCGT GATAAGGTGA CAGACTTCCA	1980
CTTGATCAT TTAGATGCTA AACATCTGGA AGCAGATATG GAAGATGGCG TTTTGGTTAT	2040
TCGTGAGAAA GTCTAAGACA GAATTTTGAG GATAAAAAAG AAGGAGCCAG CTGAAAAAA	2100
CTGGTTCCTT TTTAGGTACG ACAGGCATGT CGTATAGTAG AAGTGATTA TTCTAGTTTC	2160
AATATACTAT AGTAGCTCAG AAGTCGGTAC TTAAACGTGC TATATCAAAA CCAGTCCTGG	2220
AAAAACGTGG ACTGGTTTCG TGTTTGGATT ATTACCTTGA ACGACATGCG TTAAGGTTA	2280
GTGAACCGC CGTATGCCGA ATGGTACGTA CGGTGGTGTG AGAGGGGCTA GAGATTATCC	2340
CCTACTCGAT TTAAATCAC ATGACGTCA AAGGCATCAT CTGAAATCCC TTGTTCCAAG	2400
ATGAGTTTGG CCCATTCTTT AGCAGAGAAG AGGCTGTGGT CCTGTAGTT TCCGCAAGAT	2460
TCGATGGTTG TCCCTGGGAC ATCTTCCCAA GTAGTAGTTT CAGCGATTTC CTGAGCGAA	2520
TCCTTGATAA CAGCTCGAT TTTAGCACTG GTGTGACGTC CCCACATAAT CATGTGGAAG	2580
CCTGTGCGGC AACCAAATGG TGAACAGTCA ATCATGCCGT CAATGCGGGT ACGGATGAGT	2640
TTGGCTAAGA GGTGCTCGAT AGTGTGAAGG CCGGCAGTAG GGATAGAGTC TTCGTTTGGT	2700
TGCACCAAGC GAATATCATA ATTGGAGATG ATGTCTCCTT TTGGTCCGTG TTCTTCCCCA	2760
ATCAAGCGAA CATAGGGTGC TTTGACAATG GTGTGGTCAA GTTCAAACT TTCGACAATA	2820
ACTTCTTTTG ACATGGTAAA TCCTTTCAGT TTTCTTCTCT CATTATATCA TAAAGGTTGC	2880
TCCTGAGACA GAGAGAAAAC CTCTCCGAGG CTGGAGAGGT TGAAATCTTT ACTTACGATA	2940
TAAGCGGTCG TATTGGTAGT ATGGGTCAA GGTACGTTG ATACCCAGTT TACGAAGGAC	3000
ATTCTTGTCT TCATCAGTCA AGATGATGGT TGAGTGGGCT TCGCTTCCTT TGAGGTTGCC	3060

679

GAGTTCCTCC ATAGCGCGGG CAGCATCAGG ATTTCTGTGTA GCTGTGATAG CAAGTGCAAT	3120
CAGGATTTC A TTTGAATGAA GCGGTGGATT GCGGCTACCG AGATGATCGA TTTTAAGACC	3180
TTGGATTGGC TTAACAACTT CAGGCTCGAT TAGTTTACT TCTTTAGCGA TGTCAGCTGA	3240
TTTTTTGATG GCGTTGATCA AGGCAGCGGC TGTAGGACCA AAGAGTTCTG AGTTCTTACC	3300
AGTGATGATT TCCCCATTTG GCAATTCAAA GGCTAGGGCT GGTCCACCAG TTTCTTCTGC	3360
TTTTTTGGCGC GCAACGACAG CAACCTTACG GTCTGCAGGT GTGATACCGA GGTCTTCAT	3420
GAGCAACTCA ATTTTCTTGA CGGCAGCTTC GCCAACTTTT TCAGCTTTGA AGTCAAGAAC	3480
TGTTTGATAG TAACGGCGGA TGATTTCTTG TTTAGAAGCT TCGACAGCGG CCTCGTCATC	3540
TGTAATAGCG AAACCAACCA TGTTGACACC CATATCTGTC GGTGAAGCGT ATGGTGATTT	3600
TCCGAGAATA CGTTCCAACA TCGGTTTGAG CACTGGGAAG ATTTTCGATAT CACGGTTGTA	3660
GTTGACAGTG GTTTCTCCAT AGGTTTGAAG ATGGAAGGGG TCAATCATGT TGACATCATC	3720
AAGGTCAGCT GTGGCAGCTT CATAAGCCAA GTTAACTGGA TGATGAAGGG GAAGATTCCA	3780
AACAGGGAAG GTTTCAAAT TAGCGTAGCC AGATTGATG CCATTGATTT GGTCGTGGTA	3840
CATATTGGAC ATACACGTTG CCAATTTTCC AGAACCAGGT CCAGGAGCGG TTACGACAAT	3900
CAAGTTGCGA CTGGTTTGA TGTAGTCGTT TTTGCCCATG CCTTCTGGGG AAATGATGTG	3960
ATCCATATCC GTCGGATATC CTTTGATTGG ATAATGAAGA TAAGAATCAA TTCCGTTTTT	4020
CTCAAGTTGA TTGCGGAAG CATCTGCAGC GGGTTGGCCA GCGTATTGTG TAATGACAAC	4080
GGAACCAACA AAAATCCCTA ATTCATTGAA TTTATCAATC AAACGAAGAA CTTCTGGTC	4140
ATAAGAAATG CCTAAGTCGC CACGTGCTTT GGAATGTTCA ATGTTGCTAG CATTAATGGC	4200
AATCACAACC TCAACCTGCT CTTTCAATTC TTGCAAGAGC TTGATTTTGT TGTCAGGTTT	4260
ATAACCAGGA AGGACACGAG CAGCGTGGA ATCTTCTAAC ATTTTACCGC CAAACTCTAA	4320
GTAGAGCTTG CCGTCAAATT GGTAAATGCG CTCGAAAATA TGGTCGCGTT GTAAATTCAA	4380
ATATTGTTCA GAACTAAAAG CTTGTTTTTT CATTTTTTTA CCTCTGGACT CTATTATAAT	4440
AAAAAATTGG AAGTTAGGAA ACTACGGAGC TAAAAAAGAA ATTAAAAAGA TTAAGCAAAC	4500
GCTTGACAA AATTTTAAAA AGTGCTATCA TAGACTATAG ATTATGAAAA TAATGAGGTA	4560
AACAGATGCA AGAAAAATGG TGGCACAATG CCGTAGTCTA TCAAGTCTAT CCAAAGAGTT	4620
TTATGGATAG TAATGGAGAT GGAGTTGGTG ATTTGCCAGG TATTACCAGT AAGTTGGACT	4680
ATCTAGCTAA GCTAGGAATC ACAGCAATTT GGCTTTCTCC CGTTTATGAC AGCCCTATGG	4740
ATGATAATGG CTATGATATT GCTGATTATC AAGCGATTGC GGCTATTTTT GGAACCATGG	4800

680

AGGACATGGA TCAGCTGATT GCAGAAGCTA AGAAGCGTGA CATTCGTATC ATCATGGACT	4860
TGGTGGTCAA TCATACCTCA GATGAACATG CTTGGTTTGT CGAAGCCTGT GAAAATACTG	4920
ACAGCCCTGA GCGAGACTAC TATATCTGGC GCGATGAACC CAATGACCTA GATTCTATCT	4980
TTAGTGGGTC TGCTTGGGAA TACGATGAAA AGTCAGGTCA ATACTATCTC CACTTTTTCa	5040
GCAAGAAACA GCCGGATCTC AACTGGGAAA ATGAAAAACT TCGCCAGAAA ATTTATGAGA	5100
TGATGAACTT CTGGATTGAT AAAGGTATTG GTGGTTTCCG TATGGATGTT ATTGACATGA	5160
TTGGCAAAAT TCCTGACGAG AAGGTAGTCA ATAATGGTCC TATGCTCCAT CCCTATCTCA	5220
AGGAAATGAA TCAGGCGACC TTTGGAGATA AGGATCTCTT GACAGTAGGG GAGACTTGGG	5280
GAGCAACTCC AGAGATTGCC AAGTTCTACT CTGATCCAAA GGGGCAAGAA TTGTCTATGG	5340
TCTTCCAGTT TGAACATATC GGTCTTCAGT ATCAGGAAGG TCAGCCTAAA TGGCACTATC	5400
AAAAAGAGCT GAATATCGCT AAGTTAAAAG AAATCTTCAA CAAATGGCAG ACAGAGTTAG	5460
GAGTTGAGGA CGGCTGGAAT TCCCTCTTCT GGAACAACCA TGACCTCCCT CGTATTGTCT	5520
CAATCTGGGG AAATGACCAA GAATACCGCG AAAAATCTGC CAAAGCCTTT GCAATCTTAC	5580
TTCATCTCAT GAGAGGAACT CCTTATATCT ACCAAGGTGA GGAGATTGGG ATGACCAACT	5640
ATCCGTTTGA AACACTGGAT CAAGTAGAAG ATATTGAATC TCTCAACTAT GCGCGTGAGG	5700
CTCTTGAAAA AGGTGTTCCG ATTGAAGAAA TCATGGACAG TATCCGTGTT ATTGGACGTG	5760
ACAATGCCCG TACCCCTATG CAATGGGACG AGAGCAAAAA CGCTGGTTTC TCAACAGGTC	5820
AACCTTGGTT GCGGGTTAAT CCAAATTACG AGATGATCAA TGTCCAAGAA GCGCTGGCAA	5880
ATCCAGATTC TATTTTCTAT ACCTATCAGA AACTGGTCCA AATTGCAAG GAGAAAGCT	5940
GGCTAGTTCG AGCTGACTTT GAATTGCTTG ATACGGCTGA TAAGGTCTTT GCTTATATAC	6000
GTAAGGATGG CGACCGTCGC TTCCTAGTTG TGGCTAACTT GTCCAATGAA GAGCAAGACT	6060
TGACAGTAGA AGGAAAAGTC AAATCTGTCT TGATTGAAAA CACTGCGGCT AAAGAAGTAC	6120
TTGAAAAACA GGTCTTGGCT CCATGGGATG CTTTCTGTGT GGAATTACTA TAAATATTTT	6180
TTGCAGAAAA ATTTAAAAAT GAAATCGTAT AAAACAAGG GAGGACTGTA TAAAAGACAG	6240
AAATCCTTTG TTTTMTATAA CCAAAGTTTA TAACTTTCA TTCTTGAAAT TCAATTAACT	6300
TTACAAATTC CCACTATTAA GGAGAAAGAA GATGAACATA AAGAAGCGTG TCCTTAGTGC	6360
AGGCCTGACT TTTGCATCTG CTTTGCTTTT ACCCAAATCA TTCATACCTC TCTCAACTAG	6420
ATGTAACCTA CAAAACCCCT GACCTCATGA GCCACTTTCT TCCTCCTCAT GAGGTCAGTT	6480
TTACTTTCTG CTGTTCCAGT ATCGTTTTTC CTCGCTAGAT TTCCTCAAAA GGGCAGACTC	6540
CTCCCTTGGT GCGTCACACG ATTTTTTCAT CTCGACTGTT CTTTAATGCA TCATTAACGA	6600

681

CGCTTTTCTT CTAGGTGGTT CATAAGGAAC AGGAAGATTC AGGTTGACTT TTCTAATCCT 6660
 AGAATAAAGT GCTGAAAACA ATTCGGAATA GGCATAGAGA CTAGACAATT TGAGGAGCTG 6720
 CTTGCGTCCT GTTCGAACAC ATTTTCCGG 6749

(2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1842 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

TCTACCCATG GACTTTGAGG CATTCAATGT TCCATCTTCT AGTGGCGAAT CTTTGTGATAC 60
 AAACGATTCA ATTCACTTGG ATAGTGAAAC TCTCCCGCAA ACATTTTCTT GGTAACTCA 120
 ATCCAGCTGA TATTTCTTTC AGCCAAAATA ATGGACAAGT TCTCCCAAAA TCGTTCAGCC 180
 ATATTGCTTC TCCTTTAGTT AGATAAATAA TGTGTTTGCG CCATGTAAAT CAATTGTTTC 240
 GTATCTCTTG GCAATAGAGC TCTAGCCTCT TCCAAATTCA GACTTGGATA AACTCGCTTA 300
 TTTGAAACCG CAAGAGGAAG TCTGATGGTT AGTTCAGGAT TTTTAAAAAT TATCTCAACG 360
 AAATCCGTTA ATCTTAGATT GTCACGGTTC TTAAATCGTA ATAAATGGG AGATAAAAC 420
 TCAAAACAAT CTGAAGAATA GTCATCATC TCAATTAATT TGTCCTTTGT CATTTTCAGAA 480
 ACTGAATGAC AAGATACCTC TATGCCATAG TTTTGAAGA AATCTAAAAG AAGTTGATTT 540
 CTTTGTCTAT TTTTACTTAG ATAGAGATCA ATCATGGGAG ACCTCCCAA GATTCGGTTC 600
 CATTTGATAT TCTGACACGA TTAAGGAATC TAATAAATTA AGGAATCTAA TAAATTTGCG 660
 AAGTTAATCG GTTCTTGTC TTCATCATAA GCTTTTACAG TTAAGTTGGT TGTAAGTATT 720
 CCCTCTTTTC CCTCGGCTCG ATAGCCTTGT CCATATAAAA CAAAACGAG ATTTTGATGA 780
 TCATCTACAA AGGCATCAAC CCCATTCTTT ATGTCTTGAC TTTCAAGGAA TTCCATAACG 840
 TTTTGAAGAT AGGATTCGTA AAATAGTGGG TAGTTATGTT TTTTATGGTA ATCATCTAAA 900
 AATGTCACTT CAAACTCACA TGGAGAGTAA TTTTGACTTT GAACAGCCTA AAAGTGCCAT 960
 CAAATTTGAA TTGGAATAAA TCAAATAAAT AGCCCCATCC TCATCAATCC AACCTTTGCT 1020
 CAAAGACAAC TCCAACCGAT CTTTAAAAAC TGAGTAAACC ACCTTAACCT CCAGTTTCAT 1080
 ATTCTTATAC CGTTCCTCT CAAATAAAAG TTTGGGGAGC TTATAATAAC GCTCTGATGT 1140
 CTGATATTGA TTAGCGGTAA TACGCTTCAT TATTGTCCCT CCAAGACTAA AATTCCAACA 1200

682

TTTCCAAATT CATCAAATCG GATTAAACCT ACTTGTTCCTCA TTTCATCAAC TAACTGAGTT	1260
GCTTTTACCC AAATCATTCA TACCTCTCTC AACTAGATGT AACTTACAAA ACCCCTGACC	1320
TCATGAGCCA CTTTCTTCCT CCTCATGAGG TCAGTTTAC TTTCTGCTGT TCCAGTATCG	1380
TTTTTCCTCG CTAGATTTC TCAAAAGGGC AGACTCCTCC CTTGGTGCCT CACACGATTT	1440
TTTCATCTCG ACTGTTCTTT AATGCATCAT TAACGACGCT TTTCTTCTAG GTGGTTCATA	1500
AGGAACAGGA AGATTCAGGT TGACTTTTCT AATCCTAGAA TAAAGTGCTG AAAACAATTC	1560
GGAATAGGCA TAGAGACTAG ACAATTTGAG GAGCTGCTTG CGTCTGTTC GAACACATTT	1620
TCCCACCACG TGAAGAAAAA GATGGCGGAA GCGTTTGATT GTTAAAGTTT GGAAGTCACC	1680
TCCAGCTAGA TGTTTGAGAA AAAGATAGAG ATTGTAGGCG ATACAGCTCA TCATCATACG	1740
AATTCGTTT TTGATTAAGG TTGAACTATC CGTTTATCG CCAAAAAATC CCTCCTTCAT	1800
CTCCTTGATG AAATTCTCGG CTTGACCACG TCCACGATAA AG	1842

(2) INFORMATION FOR SEQ ID NO: 86:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 19390 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

TCATCTTTAT CTCCTCGAAA TTTTCTAATA TAGCCATTAT AACAGAATTT TGTGAAAATT	60
CCTATTATAG TAAATCACTA TTTCAGTATA AAAAGAAAAA ACGAATCAGA CGATTCGCTC	120
TTCTTAAAT CTGAAAATAG CTTTCCAGAA AGGATTAGCC GATTTTTTGC AGATTGAGCA	180
CTGCATCGTG ACTCATCAAG ACTTGACCAT ACTCTTGTA GACTGAGCGA CTGATATCAC	240
TATCGTCTGC AAACCTCGCG ATACGGGCCA ACAGCCAAGC TGGATATGGG CTTGGATGAT	300
TTCAATATC CACTAAAATG GTCAAATAAT AGCGCTCGTT CATTTTGTAG AGTTCAGAAG	360
TTTCCATTTT AAAAGTCACT GTCTTGCAA AAGTACCAA GTCAGCCAAC TTAGCAAAAG	420
AAAGGATGTA GTAGATGTAA GGTCTTTCT TACTCTCAGC TTCTTGTTCA GCCTGCTCTT	480
GCTCTTCTTC CTTGACTTCA ACTTGCTCAA GAGATTGAAT GGCTTCGATA TCATCCTTGG	540
TTTTGTCTGC GATGCTTTTT TCCAGGGTTT TGATAAATTC ATCTGGAGAC ATTTGAGCCA	600
ATCTTCCAT ATCTGGCAAA TCCGATAAGT CTTCAAAATC TAGATTTTGG TCAATCTTTG	660
ACTTGGTCAC AAAGACATCT ACCTTATCAG GTTTTGGAGT CACACGGAAG CTCAACATGC	720
CTGTATCCAG AAAGCTATCA GGCATCTCTA GTCATCCAA GATAGCATAA AAGAACTCTT	780

683

CTGTTTTTTC TTGAGGAACG AGAAAGTCAG CAATCTCCAT TCCACGATCC ATCAAATCCT	840
CTAAAGATAT CGTGATTTT AAAGTTGTAT CACTAATTG TTTCATTTTC ATTGCTAGTA	900
ACCTCATACT TTCAGTTCTA TCTATTATAC TAGATTTTTC CGATTTTATC AAAAGAAGGC	960
TCCTCTATAC GGATAGATT TCCCTAGGGT CTTTCTATAG GAGACTCCAA AAGAAAATT	1020
CTGCAGACAG ATAGAAAAAG CCTTCAAAAT CGGCTAAGAG CCGACTTTGA AGACCTTATA	1080
CATCAGAATA CTTATAATTT AAAGGTTGCT ACACCGAGGA TAGAACGATT TAAGTTTCTG	1140
AGAATTGAA GACTTTGCTC AAATTTCTTA TAACGAGTCA CTCCGTACTC TTCAACAAGA	1200
AGGACTGTAT CTCTTTCCAA AAGAGATGAT ACATCCTGTA AATCTACAAA ATGCATTCTT	1260
TTTAAAGCTT CTTGACTCTG TTTCAATTTA TCTAAGATAG CTTTATTTGA GCTAACGATG	1320
GTCAATTCTT GTCCAGTATT TTTGTATGAC AAAACATCTG CTAGGTTAGC AATGTGTGTA	1380
ATCTCTGTTA CAAAATCAAT TTGATACTGA GAAAAATCAC CTACTCTATT GATTGTGGA	1440
TTAAAGAGAT AAATAACAC ATTTCCCATC ACAACCAAAA TCACACAAAC CACTCCAATA	1500
ACAATAAAC GAAGAATCAG ATTTTTCACA TTTAAGCCAA GCGCTGTTTC ACCATTTGCG	1560
TTCAATTCTT TAGAGTTGAT GGTTCAGT TTTTCAATTT TCACATTTGC ATAGGCATGT	1620
TTAAATTTCT CAATCAACCC ATCAATTTTT TTCTCTAACA AGTTATTGGC ATCTTTACTT	1680
GATGTCAAAA TTTTCACACC AACCCTGCA TCGTCAATCA TATAGTAGAC GGTCAATTTT	1740
TTCCACCAAT AGTCATTCTG TGAATTTTC AAGGTTGTTT CTGTCGTGTC TAATTCACTG	1800
GCAATTTTTT TCAACTCACT GGGTTCTACA TCATTGAAAA GATAAGCTCC ATTCAAATTA	1860
CCATCAATCA ATTTCCCAT AATACTACTA TAACCACCAA TTTGATGATT CAAAATCGTT	1920
TTGTCCGACT CTTTGGAGG AGTGATTTTA TAGATAAGAT AAGTTGAATA ACTTGTGTGA	1980
TCTTTGACAG TGTTTTTATT CCTAACTGCT TTAATTGTAA ATGGTACAGC AATGAGAGCA	2040
AATAAAGCGA TGAGAGCTAA AATATTTGCT TTTCGCTTTT TATAAAGATT TGCAACAAA	2100
TCAGCTACTG AATAATGTTT AAACATGATT TTTTCTCCT TTGTTTAGTA GATACTAGTT	2160
TTCTTTGTGA AGCATTTTGT CTACAAATAT AATCACAAGA ACAATTCCCC AGAATTGCAT	2220
TGTAAATAAA TTGAAGAAAC TTTCTGAAAA GCTGCTTCTT GGCATAAAGA ATAGATTATT	2280
CAAGATGAGT AGGGATAAAG CAAATAGGAT TGTCTTGAG CGATAGGCTA CTTGCAGCAT	2340
GGCTATAAAT AATACGCCGA GTAAGAACT AAGCAGAAAG ACTCCAATCA TACCATAGTC	2400
GGTATACAAC TCCATGATAT AACTACTTCC GATACCATGC CTTTCAAGT ATTCCTTGTT	2460
CAAGACAAGA TAGGATAGAT TGTGGGCATA ACTATTACTA TCAATAGCTA GTTCCACACT	2520

684

ATTGGTTGTA TGTTCAAAGG CTTTTCCTCC GAAAATGGCT CCCAACTCC CCCTTGCAAA	2580
ATAATCAAGA ACAGGACCAA AAGTAAAATT ACGGAAATCT CGGTAAGGGA GGCTACTGTT	2640
AAATAGAAAA CCTCGAGCCA GAACACCAAA ACTAGTCCCT TGTTTATAGA TAAAGTCAAG	2700
TAAGATATCC CAGAAACCTG TATGGGAAAC TTGGACATTA TCCCGTACAT AATTGAGTAC	2760
TCCCATCGCT AACATGAGAA TAGGAGAACC TACAAAAATC GCTAACTTTT CTTTAAACCC	2820
AATCCATTTT CCTTTTTCAG TTTGCTCCCG CATAAAGTAA TAAACAAAAG CAAATmAAAT	2880
ACTTAAATA AAGGGATTTC GTGTCCCAAT TGCCAAATGA ATAGTATTAG CTGCAATAAA	2940
GGAGACAAGC ACTGCTGTGG CCTGCAATTT CTMTGGCTTG GTTGCCAGAT ACATACACAT	3000
TGCATAGACC GTAAAGGTAG ACAAATGTA GGTAAATAA GGCAGTTTAC TTTCAAAATT	3060
TGCATAGTAG GCATAGTAGG AAGTCTGCAA ACGATACAAG AGCCGTTCAA ATAACCGAAT	3120
GAAATAGAAA GGATAAGTTA GAAGAAAAAC TCCTAGTGAT ACAAGCGTA ACCGCTTGAT	3180
ATAAACCTCT TTTAGAGAAT TTCCTATATT TGCTACTTTT ATTTCTTCC TAGCTATGAA	3240
GTAACGAGCC AGAATGCCTC CTGTGGTCAA GCCCAGAATC GAAATCATGA CAACTATAAA	3300
GGCAAAACGA TAGGCTATTG GATGATAGGT ATCCAAAGCA CCATCCCTAA AATAATCAAT	3360
GGTCGGTCTT GATACCAGAA ATACAAAAAT GGTAAATAG AAAATAAAAT GGATTAAAGTA	3420
ATACTTGATA TCATTCCAAC AAGCAATTAA GCTACTAACC AACAAGAACA ATAAAGTAGA	3480
AAGTAAGCTA ACATTATTAT TATTAAACAG ATACACAATT CCACCTACTA GCGTCAAGGC	3540
ATAACTGACT ATGGTCAAAC TAAATAATAA TCGTTTCCCA TCAATCACTT GGTCAACCCC	3600
GTTCTAATGT AATTTTTCAG ATTTTTCAT ATTTTTCAGT AATAAGAATC GATATAAGGA	3660
AATATTTATG AATAGGGCCA AAGCACTAAT TCTTCTCCCC TTACGGAAAA TTGGATTCTT	3720
AGAAATAGCA AAGGCATGGC CTTTAAAAA ACGATGAATC TGAGAATAGG CTTCAAACCTG	3780
TTTATACTGA TCATCTAGCA ACATCTTATC CAGAATAAAG AAGTGGGCAT AGGCCAATCT	3840
GAAAAAAGCG ACCTCTTTCA AGTCAGGATA GTTTTTCACA ACTTCATTAT AAAACTTTTG	3900
GTAGATATCA ATATAGGCTA AATCCTTCTC TGCATAGGGT TTGGTCGTAA TACTATCCCC	3960
TCTATGGAAA TAGTAATAAT AGGGTTTAGT ATTAACCACA TACTTCTTGG CCAACTTGAT	4020
TAAATCAAAA TGGTAATAGG CATCTTCGTA AATCAACCCC TTAGGAAAGG ATAGGGCAGT	4080
TGCAATCTGT CTCTTGATTA GCTTATTGCA AATCGTCCCA GGTATTTTTT CACCTATGAG	4140
GTATTCCTTT AGAAATGTTT GAGAATCACA GACAAAATAG TCATCCTGAT TGGCTGACTG	4200
TGGGCTTTCA TCATTAGCAT AGACATTCAT GACACCACAG CTCGAAACAT CCGCATCTTC	4260
TTGAACTAAT TGCTCATATA AGCTCTGAAT CATTTCTGGA TGGATATAAT CATCTGAGTC	4320

685

AATAAAATC AGATAATCCC CGTGAGCCTG CTTTCATCCCA TCATTTCGTG CTTGCGACAA	4380
TCCTTCGTTT TTTTATGAA GCACTGACAC CCTGTCATCT TGTTCAGCGA TTGAATCACA	4440
CAAGCGACCA CTTTCATCTG TTGCACCATC ATCAACAAGA ATAATTTCCA GATTTTGATA	4500
GGTCTGCTTC TGAATGGAAG CTATCGATT TTTCTAGGTAC TGCGCCACAT TATAGACTGG	4560
CACAATCACA CTAATTAATG CAGTTTCCAT GCTACTCCTC TAATAGTTTT TCTACTTGTT	4620
CGATTTGTTT TGTAATTGTA AATTGTTGAA TGAATTGGCT AGCCTCATCG ACATCAAAGT	4680
TTGAGGCAGA AGTCATGTAA TTAGTAATCG CCTGAGCTGC CTCCTGATTG CTCTCAATGA	4740
TTTGTCCAAA TCGTCCCTCT TGGGATAATT CCTCAGCCCC TCCAACGTCC GTAGAGATAA	4800
AAGGGAGTCC CAGACTCAAG GCCTCCACAT ACACTCCAGG AAAACCTTCT TGTTTAGACA	4860
TAGACAAAAG AACTTTCGTC TGAGATAGAT ACTGATAAGG ATTTTTTTGA TAACCAAGGA	4920
AATGTACATA GTCCCTCAATC CCATACTCTT TGACTCGTTT TTTCAGTTCC TCTTCCATAT	4980
CACCAGCCCC GATAAAATAG AGATGATAGT TTTTCCCTC TTGGTGTAAT AATCGTATCA	5040
CTTCCACTAC ACGGTCAGAA CCCTTATTTT CCTCAATCCG TCCGATAGTA CAGATACTTT	5100
GAGGAGCAAT CTCGATATCG ATCTTCTCTT GAGATTTTTC TAGAATAGTC TGAATATCAT	5160
ATCCATTGTA GATTGTCTGT AATTTAGAAG TATAATCTGG ATAAACTTCC TTGATAGAAT	5220
TGCTGGTCTT TTTTGAAATC CCTACAATTG TATTGCGAGC ATCCAAGTGG CTTCTATGTG	5280
ATCTCTCTTT AGAGCTATCC TTAAGAAGT CTTCAATACT TCCATGAATC CAAGATATCT	5340
TCTTGACTTC TCTTCTTTTA GAGAACAACA GTGGTGATT CATAATGGTA AAAGAACTT	5400
CAACATCATA ATCATCTTTT ACAAGCAAAC GACGAGTCAG TCTTGAAAAA TAAATTTCTCA	5460
TTCTCCACAA AAAAGCTCGT AACCATCTGG TTTGGCGATA ATCTTGAAGG GATTTTAAAA	5520
TGCGTACATG CTTTGGAACA GATTCATATC CCTTGTCAA GTGCTCCATT TCAAGAATAT	5580
CAATATCATA CTTTCTGGA TCCAGATTTG AAACAATGGT TGATAGAATC TTCTCTGCAC	5640
CACCTCCAAG AGAAAAAGAC CACATAAAAA ATAAGATTTT TTTCTTAGCC ACCATATTCT	5700
CCCTTGATTT CTGTATAAGA CTTATCCATA TCAGCGATGA CAGCATCATG ATGCGGTACC	5760
TGCTTGCTCG CTGGTGGAGG CGTCATATAA TCCCAAAAAG CAGTTCTGAG ATAGACATCA	5820
TAGCCGATTG GAATAGGCAT CTCTGTTCTT TCAAATGGCA AGAAAAGATT GTCTTCAAAA	5880
GATGTGATTG GGTACTTGTT TCTCATGTAG CCAGGACCTG AGCATAATTC TGTAAATGCCA	5940
TCACAATCAG CCAAATCATA CTTAGTCATT TCTTCTCAG CTTTTTTCCA GATGCGATAA	6000
CGGAGAGATT TTGGAGTCAA ACCCAGTAAA ATGCGACTTC CCCATTTTCAT GAGATCACCA	6060

686

TGCTTTTCTG GAATAGTTTG CGCACAAAAG AGTGAATAAA TCAAGGCCCA ACGAACCTGT	6120
TTTTCCTCGT CAGCTGGATT TTTTCGGATAA TAATCCAAAG GCAAAACATC CAAGGCCAGA	6180
CCATGTGGCA AATCCAAATC CTGCTGATAA GGCTTGATAC AGGTGGTTTT CTGTGACGA	6240
ATGGTAATAA AAAGATTACG ATCAACAAA TCCTTGAGAC TCTTTGACAA GAAATAACGT	6300
TCATCTGCAT AACGAGGCCA TAATTCCTGCT AATTTCTCAT AATCTTTACG AGGCATAAAA	6360
AAGTCTAGGT CGTCGTCCCA AGGAATAAAT CCCTTGTTTC GAAGGGCACC AATAGCGCCT	6420
CCGCCACAGA GATAACAGAG CAAATCATGT TCTTTACAAA AGGCCACAAA ATATTCAGCC	6480
ATCTCCAGAC TACGAGCCTG AATTGCTTTT AAATCAGTCA TATTGTTTAT TATTCTTTCT	6540
ATCGTATCGT TTCATTATAC CACAAACAAG GGGTGAATAT CTATTGCAGA CTGTAAAAAA	6600
TCAAAGCCTG ACTGCTATCC AAATAGCTAT CAAACTTTGA TTTTCTGTCT TTATACTCTT	6660
CGAAAATCTC TTCAAACCAC GTCAGCTTCA CCTTGCCGTA GGTATAGGTA ACTGACTTCG	6720
TCAGTCTTAT CTACAACCTC AAAACTGTGT TTTTAGCAGC CTGCGGCTAG CTTCTAGTT	6780
TGCACTTTGA TTTTCATTGA GTATTATCTT ATCTTAAGCC CATTTGAGCG AGCTTGGTTT	6840
GATATTTGTT TTGATCAACC AGCAGGCCCA AGCCCCATA AACATCATAG GCATCTACCC	6900
AGTCACCCAG TTCTGGAATC GTCAATTTTT CAATACCATT TTTTGCTCCA TCCAAAACAG	6960
ATAAACCGTT TGTTAGGAGG AAAGTATAGG GTACGTTGGT TGAGGTCATA GCAAAAACCT	7020
TTCCAAGAGC TTCAGAACCA GTGAAAAGTT TAGTGGGATC TTTAATTTGC TCTAAAATTG	7080
CTGTTAAAAC TTGTGCTGT CTTTTGTAC GGCCGTAATC TGCCTCATCA TCATCACGGA	7140
AACGAGCATA ATTGAGCAGG GTCGAGCCAT TCATCTGCTG TTTTCCGACT TTAATGGTTT	7200
GGGTGGAGA CTCAGTCTCG GTAGCGTATA AATCATCTCC GACTGTAGCT TCTGTTAGGG	7260
GACGCCCATT CAATGTTGAA AATTGAGCAT CAATCGTCAC CCCATCAGGG AAAAGCGTGT	7320
CAATCGCTGT GGCAAAGGCC TGGAAATCAA CCAAGGCGTA GTACTTAATG TCCAAGTCAA	7380
AATTATCTTT CAAGACTTGG CGAACCATT CTGCCCCCTT TTGCCCCCTT TGTCTCCTA	7440
ACTCGTAGGC TACGTTTAAC TTGTTATCTG TCTGTTTCTT ACCATTAATC ACTTGACTAT	7500
AACCATCTAT ATAGACCAAA TTATCAGCA TGAACTGAC TAGCTTCATT TTCTTATCTG	7560
AGCCCCGAC ATTTAATACC ATAATAGAGT CAGTTCGTGT CTCAACACTG TTCTGGCCGA	7620
TTGACCATC AGTACCCATG ATTAATAAT TAATCCATC TCTAGTGTCC TGACCATTAA	7680
AGACTTCTAC TTGAGCTGCC CGGGCATCAG CAGTTTCTT TCGCTAGCA TCTTGTAAC	7740
CACGCAAAA CATGAATACC ATGGCCAAAG CCACACAGAC CAAAAGTGAA AAAATCACCA	7800
TAAAAATTCG TTTAAGACGG AGCTTCCGTC TTTCTTTTT TGGAGGGAAA GAGAGTGCTT	7860

687

GTGATTTGGA TTGTGAGCGA CTCCGGTTCG CATAGCTTGG TAAGTCAACC TGCTCTTCTC	7920
TTTCTTGTTT CAAGCTAGAG CTACTATTTC CCCTAGCAAG AGTTAGCTTT TCTTGCAAAT	7980
AGGCAAATC ATTTTTTTCT CTCTCATTGA GATAGTGAAT ATTTTTTAGC AAATAATCAT	8040
AACGCAACTG CTCATGATGA CTTAAGGGAT TTTCTTTACT CATCTTCTCT CCTTTCCATG	8100
GTCTGATATT GGATAAATAG GATAGGCACC CAGAATTTTA TACTGGATTC CAATCGCTTC	8160
TAATTCCTTT TGGGCAAAGT GGACCAAGTC CTTATCGGTA TAATCCACAT CGATAATGAA	8220
AAAGTATTCA CCCAGTGCTG TCTTGAGTGG ACAACTTTCA ATTTTGTGCA AGTCAATTCC	8280
TCGCCAAGCA AAGGTCGACA GGGCCTTATA AAGTGCACCT GGAAGGTTGT CAGGTAATGT	8340
CAAGGCCAAA CTCATCTTTT CAGTTTGTGC TTGCAAGGA ATACTAGGCT TTTCAGCTCC	8400
TAGAACCAG AAACGTGTGA AATTGGCTTC CATTCCTGA ATATCCTCGG CAATCAGTTC	8460
CAATCCATAT TCTTCAGCAG AACTTCTAGG TGCAACTGCT GCAAAGGGCT GGTCTGGATG	8520
TTCGGAAATA AAACGGGCCG CATAAGCTGT ACTAGCTGTT ACCTCGATTT GAGCCTCTGG	8580
ATATTGTTCA TCGATGAATT TCTTTCCTTG AGCCAAGGCC TGTGGATGTG AAAAAATCTT	8640
TTCAATCTTA GTATGGCCTG GAACCACCAT CAACTGCTGA TGAATAGGCT GAACGATTTT	8700
TGCTACTGCT TGGATGTGAG CCTGATGAAA AAGATAGTCC AAGGTTTCAT GAACACTACC	8760
CTCAATAGAA TTTTCAACTG GCACCACAGA ATAGTTCAT AATCCTTGCT CATAAGCCTT	8820
GATGACATCT GTAATGTTGG CAAAAGCCTG CAATTCCTCA TGAGGAAAAG CTGTCTGCAC	8880
AACGTGGTGT GAAAATGATC CCTTGGGACC TAGATAAGCA ATTTTCATCT TAGTTCCTCT	8940
ATAATTTCTT CTGGGCTTAG CTTGGTCACA TCCAAAACCC GACTAGCCAC TTCCTCATAC	9000
CAAGCCTGTC TTTCTTGAA AATAGCTACT AGTCTTCTCT TGCTATTATT TAGAAAAAGC	9060
GGTCGCTGAT TGTCTTATC AGCTGCGATA CGTTGGTAGA GGGTTTCAAA ATCTGCTCTC	9120
AGGTAGATGT TATCTGTATT AGTCTTGAGT AAGTCACGAT TTCTCTGAGA AATAACCACT	9180
CCTCTCCAG TTGACACGAC TTGGTCTGTT TGTAGTAAAT CAGCTAGGAC TTCTGATTCT	9240
ACCTGACGAA AGGCTGTTTC TCCCTTTTCA GCGAAAAAT TCGCAATGGA CATACCTAGG	9300
CGATTCTCAA TCAGAGCATC CATATCAAGG TAATTAGGGT CCAAGCCTCT TGCAATAGTC	9360
GATTTTCCAG CCCCCATAAA CCCTAATAAC ACCTTAGCCA TGAATCAAGC TCTCCAAATC	9420
ATCAAAGAAA CTAGGATAGC TGGTATTGAT GGCTTCTGCA CGGTCAAGCT CCACCTCTCC	9480
ATCTGCAACC AAGAGGGCTG CGATAGCTGT CATCATGCCG ATACGGTGGT CACCAAACGT	9540
ATTGACTCTA GCACCGTAA GAGCTGATTT TCCTTTGATA ATCATCCCAT CTGCCGTAGG	9600

688

AGTAATATCT GCTCCCATAC TATTTAAGGC GTCTGCCACA ACCTGAATAC GGTCTGTTTC 9660

CTTGACCTTG AGCTCCTCAG CATCCTTGAT AACTGTTACA CCTTGGGCTT GGGTCGCAAG 9720

CAGGGCAATA ATGGGCAATT CATCAATCAA TCGTGGAATC AAAGCGCCAC CAATCTCTGT 9780

TCCTTTCAAG TCAGAAGACT CAACAATCAA GGTAGCAGAT TTAGCGACTG GATCGATTTC 9840

AGTTATTTCC AATTTTCCAC CCATGGCAGC AATGACATCA ATAATACCGG TGCAGAGTTTC 9900

GTGATCCCC ACATTCTGCA GCACTAGACG AGAATTGGA GCAATCAAAC CTGCGACTAA 9960

CCTAAAGGCT GCACTGGAAA TATCTCCTGG TACGACCACC TTCTGTCTCG TCAATTTTTG 10020

TGGCCCCTGG ACTGTGATT TCTTACCATC CACACTTAAA TGACCACCAA ATTGTTTCAA 10080

CATATCTTCA GTATGATTAC GGGTGACTC TTTTTCGATA ATAACCTGACT CCCCTTAGC 10140

TTGTAAGGCT GCAAACATCA AGGCTGACTT GACTTGGGCA GAGGCAATTG GCAACTCATA 10200

ATGAATAGGT CTTAGGTTTT TCGTCCCTTT TAAGCGAAGG GGAGGCAAGT CTCGTTCACT 10260

TTGCCCTGAA ATGCTGACGC CCATTTTTTT CAGTGGAAGG GTCACACGGT CCATAGGACG 10320

TTTGGAAGA CTATCATCTC CAAACATCTC TACTTCGAAA TCTGCACCAG CAAGGACACC 10380

TGAAATCAGG CGAATCGAGG TGCCAGAATT TCCCATATTA AGGGCATTTC GTGGCGCTTT 10440

TAAGCCAGCC ATGCCTACAC CTTGAATGGT AATAACCCCA TCTTTATCCT CAATTTCAAC 10500

ACCAAGGTCA CGAAAAACCT GCATGGTCGA AAGAACGTCT TCACCTCGCA GAATATCATA 10560

AACCTTGCTC TCACCCTCAG CCAAACCTCC AAAGATAATG GAACGGTGGC TGATAGACTT 10620

GTCACCTGGG ACGCGGATAC TACCATGTAA ATGGCGAATG TTGTTTTTTA GTTTCATACT 10680

GGACCTCATA CTTGCAATAC TTTTACCTAT TTTATCATAA AAAGCCAGAA ATTCCTTAAA 10740

AATTCCTGAC TTTAGGATCG TTCTTTTCTT ATTTTCAGCA TTCTGAAACT GGTTCAAAAA 10800

CAATTTTTTC AATATCAGAA AGGTAAATGG CCAATTGTTG TTGCTTGGA AAGAATTCTG 10860

ACAAGAGGCT ATTCCTTGA ATCTGTTTAC CAAAGCCTTC CATCTTAGCT TGAAGGACG 10920

CATCTGGCAT TTGACCTGTC TGTGCTAGT TTTGAATTC CTCTTGAAAG GCAAGATAAT 10980

CTGTAAAGAT TTGCTTGCC TCAGCATCTG CTGCAATCGC ATCTTTAGCT GCTTTAACAG 11040

CCTTGATTC TGGTAATCCG CGTAGACCGC GACTGAGTTC GTTGCACCTA TCGTAAATAT 11100

TTGACATGTT CTTCTCCTTA TTTGATGACG ACTGTATAGT CAGTATTTTC TGTTATGAGA 11160

TGCTCAGCTC TTTCCAAGTC TTGAGCATTT TTAATGAAA TTTGTAGGAT TCCGTGAATA 11220

TCCTCAGCAT TTTCTCGT GATGTGGATA TTAACCAAGG AAGTTCCACG TAGCAGTTCC 11280

AAAATCCGCA GGATGACATC TTCTTCATCA GGAACGTCAA CATAGAGGTC GTAAGAGCTA 11340

TCCACACCAC CACGCTTATG GATTTCCATG GTCTGGCGTT GTTCACGCGC TTGGTTAAAA 11400

689

AAGTTCCAAA TTTGCTCTTC ATCTCCCTTA CTAATGGCCT GACCAATCGC TTCCAAACGT	11460
TCCTTGAAAT CCTCAATTCT ATCCAGAATG ATCTCGCTAT TGGACAAGAG AATGGAGGTC	11520
CACATTCCCTG GCTCGCTTTC CGCAATTCCG GTCATATCTC GAAAACCACC TGCCGCAAAG	11580
CGCCTTGCCA TCTCATGCTC TTGAGCATAG ACCGCAGTCT GCTCCATGAG ACTAGAAGCC	11640
AAAATATGAG GAAAATGGCT AATCTGAGAA GTGACACGAT CATGCTCCTT GGCATCAATC	11700
TCGATAAAAC GAGCATGAAG ACCTGAAAGC AGATCCTTCA TTTCTTAAG CGTGTCTGA	11760
CTTGTCAGGC TTGAAGGTGT AAAGATATAA TAGGCATTTT CAAAAAGATT GACATCTGCC	11820
GAAGCAGCCC CTGTCTTGTG ACTACCAGCC ATGGGATGGG CCCCACAAA GCGAACAGAC	11880
TTGCCAGCCA AATACTGCTC CGCCGCATCC ACAATGGTTG ACTTGGTCGA ACCAGCATCT	11940
GAAATAATAA CGCCTTCTCG CAAATCCAAA TTGGCCAACT CCTTAATGAA AGCAATAGTT	12000
TGTTTGATTG GCAAGCTGAG GATAATGACA TCTGCCAAAG GAGCAAACT AGCAAAATCA	12060
TCCGTTGCAC GGTCAATCAT ACCTTCTTTC AAGGCGATAT CTCTCGAAGC TTGACTACGA	12120
TTATAACCTA AAATTCATA ATCTGGATGA TCGCGTTTGA TACCAAGTGC CATAGAGGCT	12180
CCAATCAACC CAAGACCTGC GATATAGATT GTTTTTGCCA TAGGAACTCC TTAATAGTTC	12240
TTTGTATAGT CTCGGTGTTC GGCTACCGCT TCTTTTAGTT CCTCAAGATT ATCTGATGAG	12300
AATTTTTCGA GGATTTCTTG CGCCAGAACC GTTGCTACAA CTGCTTCCAT GACCATTCTT	12360
GCAGCTGGAA GAGCAGTCGG ATCACTTCTC TCCACGGTTG CCTTGTAAGG TTCGTGGGTT	12420
TCGATATCCA CACTCATAAG AGGTTTATAA AGAGTAGGAA TGGGTTTCAT GACCCACGA	12480
ACAACGATGG GTTGCCCAT TATCATACCA CCTTCAAAC CACCTAGATT ATTGGTACGG	12540
CGAGTATAAC CGTCTTCTTT AGACCAGAGA ATTTTCATCCA TAACTTGGCT GCCTTTACGA	12600
TAACCAGCCT CAAAGCCAAG ACCAAATTC ACCCCTTTAA AGGCATTGAT AGAGACAACA	12660
GCTTGAGCCA ATCTTGCAAT CAATTTTCTA TCCCATTTGA CATAGGAACC AAGACCAACT	12720
GGAACGCCTC CGACGACTGT CTCCACAACC CCACCGATGG TATCACCATC ACGTTTGATT	12780
TGGTCAATAT AGTCCTTGAT TTCCTGTTCT CGTTCTTGGT TGACAATAGA AACTTCAGAC	12840
TGGGCAGCTC TTTGCTTAAT TTCAGCGACT GTCAGATTTT CAGGAACATC GATTTCCTTG	12900
CCACCAAAGA CCACGACATG GTTGGCAATC TCCATATCCA GCTCAGCCAA GAGGCGTTTG	12960
GCTACTGCAC CAACTGCCAC CCGCATGGTG GTTTCACGAG CTGATGAACG CTCCAAAGAA	13020
TTTCGCAAAT CATCAAAACG GTACTTAATC CCCCACCA AATCGGCATG ACCTGGGCGA	13080
GGATGAGTAA TTTTCCGCTT GCTTTTAAGG CGGTCTTCAA TGTCTCCGC AGACATGATG	13140

690

TCCAGCCATT TCTGGTGGTC CTTATTGATG ACATCCATAG TAATAGGCGC CCCTGTCGTC	13200
TTCCCGTGGC GAACGCCCGA AGTAAAGACA ACCTGGTCAT TCTCAATCTT CATACGACCA	13260
CCACGACCGT AGCCACCCTG ACGGCGTCTA AGGTCCTCAT TGATATCCTC AGCTGTCAAT	13320
GGAAGTCCAG CTGGAATTCC CTCAATAATA GCTGTTAGAC GGGGGCCGTG TGATTCTCCT	13380
GCAGTTAAAT ATCTCATACA CTCTCCTTAT TTTACCAAGT AGTCTTTCAT CTCTTCCAGA	13440
GAAACTGGGT GAATGGTCGC TGAACCAAGC TCTGGCACCA AGACCAATTT CAAGGTGTTA	13500
CCACGCGCTT TCTTGTCATG AGTAAGAGCC TGATAAAGCT TGCCAACTTC CCAATTTTCA	13560
TAGTCAACAG GCAAACCGAA TTTCTGACAC ATCTCTGTGA TAGATTGGGT AATGCCAGCT	13620
GGCATGAGGC CTTTTCCTC AGCAACCTTG GAAATCTGTA CCATTCCCAT GGCAACAGCC	13680
TCTCCATGCA TGACCTTGCC ATAACCGCA GTCGCTTCGA TGGCATGGCC AATAGTGTGG	13740
CCAAAATTGA GGTAAAGACG AATACCATTG TCCAACCTCAT CTTCAACCAC CATCTTGCGC	13800
TTCACCTGAC AAGAATGTTT AATCAAGGTC TCTGCATGTT CCAAATACT CTCAACAGAA	13860
CCATTGAGTC CCGTCAAGAG AGCCACAGT TCTGGATCCT CAATCAAGCC ATACTTGATA	13920
ACTTCACCCA TCCCTTCAAT CAACTCTCTT TTTCCGAGGG TTTCAAGAAC AAGTGGATCA	13980
ATCAGAACCC CATCTGGTTG GGCAAGGTC CCCACCATAT TTTTAGCAA TGGTGTATTA	14040
ACGCCTGTCT TTCCACCGAT AGAAGAATCA ACCTGAGCTG TCAAACCTAGT CGGAATCTGA	14100
ACAAAGTGAA TACCCCGCAT ATAGGTAGAG GCTACAAATC CAGCCAGGTC CCCAACAACG	14160
CCACCACCAA GAGCAACGAT TCCATCGCTA CGAGTCAGAC CTTGCTTGAC TAGAAATTCA	14220
TAGACTTTCT GAACAGTAGT TAAATCTTTT CTTTCTTCAC CTTCTAAGAA ATCAAAAACA	14280
GCTACCTGAA AACCAGCATC TTCTAGGCTG AGCTTGACCT TCTCTGCATA GAGAGAGGCT	14340
ACATGGTTAT CTGTCACAAT GACTACCTTT TGCGGTTGCC AGAGTTCTCG CAACCACTGA	14400
CCAGCCTGGG CCATACAACC TTTTTCATC TGAATATCAT AAGGATGGTG AGGAATATCG	14460
ATTCTGATTT TCATAGGAGA GTCTCCCTTT CTTTATTGGT ATTTTCTGT TAAAGACTGC	14520
CAAATCTCTT CTGTCGGCAT TTCCTTGCCT GTCCACAGTT GAAAAGCTTC TGCAGCTTGA	14580
TAGAGTAACA TTCCAGACC ATTGACTGCT GGATTGCCCT GACTTCTAGC CCATTTCAA	14640
AACGGTGTTC CAAAGGGTTG GTATATGATA TCTGCAACTA AAAGAGTTTC TGGTAAGACT	14700
ATGTTTTCAG GAACAGGAGA GGATTGGCCA TCCATGCCCA CACTGGTGGC ATTAACCTAGC	14760
AAATCCGACT CGGCAATCCT TGCTTGCAGT TCAGAAACAT ATTCTAAAGC ACACAAATCC	14820
ACTTTAAAC CTGTCTGCTC CTGTAACCTG TCTAGGTAAG GTCTTGTTTT TTCCATAGAA	14880
ACGGAACGAA CAAAGACCGA AATCTGACTG ACGCCATCCA AAATAGCCTG TGCCAAGATT	14940

691

GATTTAGCCG CACCACCTGC ACCCAGCAGG GTCATCTTTT TACCTGAAAT TGTAAGAA	15000
GGCAAGCACT TAAAAAATCC CTTGCCATCT GTATTATATC CAATTAAAT GCCATTCTCA	15060
TTGACAACCG TATTAACCGC ACCAATCAAG CGCGCTTCAT CGCTCAGCTT ATCCAAATAA	15120
GGAATCACCT GCTCCTTATA GGGCATGGAC AGATTGATGC CAAACATCTG GTAGCGACGA	15180
ATATTGGCCA CTGTTTCTAC CAAGTCACTC GCTTCAATCT CCAAGCCAC ATAAGCACCG	15240
TTGGTAGCTG TCGCCTCAA GGCTCTATTG TGGATGAAGG GAGAAATAGA ATGCTTAATA	15300
GGATTGGCAA CAACTGCAGC TAAACGTGTA TAGCCATCAA GCTTCATCCA AAATCTCCCT	15360
GATTTTTTTC ATGCTAGCTA GAGAAATCTG CCCAGGGGCA CTAACCTCAT CCAGACTGGC	15420
AAAAGACCAA CTCGAACCAG TCACATCCGC AGTGATACGA GAGACCTTGC CCACCTTACC	15480
CATAGAAATG GTCACATATT CCTGTTTCAGG ATTGAGGGTT TTAAGCCTC GTGTATAGTT	15540
CATCAAGTCT AAGACATCCT GCTCCGTGTG AGCCATCACC GCAACCTTAA CAAGTTTGG	15600
ATTTAGGATC GTCAACTCTG ACAAGATTTC CATCATGTTT TCAGGTGTTT CTTGGAAATT	15660
ATGGTAATC AAAACAAGAT TTGGGAAGTC CAGCATTTCC TCAAAAACAT CCTTGTAGCT	15720
ATAGTACTCA AAATCAATAT AGTCTGGTTG ATAGAGTTGC GCAACTTCCT TGATTAGATG	15780
GATATACTCT TCTGGAGAAA GGTGATTTT TCCACCTTCG GAGCGAGTTC GTAGCGTGA	15840
AACCAACTCA CGGCCTGCGA ATTTTTCAAA AATGGCTGGA GCTACCTGCA AAATCGCTTC	15900
TTTAGGCAGA TAGTCGGCAC GCCATTCAAT GATGTCGGCA TCCAGGTACC TCGTGGCATC	15960
CAGAGCCTGA GCCTCCTCTA AACTTCTTGG CATTACTGAA ACGATTAATT TCATTTACTA	16020
ACCTTCATAC TAATCACCTT GAGGTAATTA CTACTTTCAT CTTTTTTATT ATAGGCAAAA	16080
TCTGCTGGAA GACCATATTT GTTAAAAATC TGGTAACTTC TTCCTGCAAA ACCTTTATCA	16140
ATTTGTTCTG TAAATTTCTG ACGGGAACA TTGGCAGCAT TGGTACTGGC AATGATAATC	16200
CCTCCCGGAT TTAAATCTC AAGACTCTGG GAAATCAACT TGTGATAATC CTTGGCCACA	16260
GAGAAAGTTT GTTTTTTATT CCGAGCAAAG CTAGGCGGAT CTAGGACAAT CACATCGTAG	16320
GTCAAGTCTT TGCCTTTGGC ATATTTGAAA TACTCAAAGA CATCCATGAC TATAAACGA	16380
TGCTCGTCTG TGCTGAGCCC ATTTGCCTGA AAATGCGCTT GAGACAATTC TCGTGAACCT	16440
TTGGCTAGAT CAACAGAAGT TGTATGGCTA GCTCCTCCA TGGCCGCAGC TACTGAAAAA	16500
GCCGCTGTGT AGGAAAACAT ATTGAGTAAG GATTTACCCA TAGCCAAGCC GTCAACTAAA	16560
CTACCGCGAA CCTCATGCTG GTCTAGGAAA ATTCCTGTCA TCAAGCCATC ATTCATAAAG	16620
ACTTGATACA GGACACCATT TTCTAAAACA TTGAAAAGT CAGGTGCTTC TTGACCATAA	16680

692

ACATGGGCAG ATTTCATAGTC CAAACCCCTTA AAGCGGATTT TCTCATAAGC TCCTAAAACC	16740
TCAGGGAAAA CCTGTCTAAA GGCTTCTGAT ATAGTCTGAC GAATCTGATA AACATAAGAG	16800
TTATACCAAG AAAAGACGGC GTAGTCGCCA TAAAGGTCCA CTGTCAGACC CCCAAAGCCA	16860
TCTCCCTCTT GATTAAAGAG ACGAAAGGCA GTTGTCAAAT CATCTTGATA GTAGGCGTTT	16920
CTCTTTTCTT TGGCTTTTCT AAACAACGTT TCAAAGAAAG CTTGATTGAA GGCCACCTTG	16980
TCTTTGCTGA TAAACCAGCC CAAGCCCTTG TTTTGCTGAG AAAGGTAGGC AGTCCCAAGA	17040
AAGTTTCCTT CTGACCCTG CACCTCTACT TCCTGATCCT TAAGATTGAC ATTCTCAAGA	17100
TCACTGGCTT CTAGTAAAC TAGCCCCCTTA GCAAGCTTCT TTTCAACCCT TTTGCTGACT	17160
CTTATTCTAT TCATAACTAC CATTATATCA AACTTTTGA CAATTCTCAA AAAAGAACT	17220
ACCCTTGCTT TTTTACTCTT CTTTAAAAA ATGGTATACT AGACTTCCTG CAAAACCTAGG	17280
AAGTAAATGT GTAAGAATCA CAGTAAAAA TGCTCTCCG TCTTGAGGA GCATTTCCTT	17340
TTATCAACGA AAATCAAATA GCAAATATG AAAGTAGCCT CAGGTTAACT GTGAGATTAT	17400
AGGTAGAGAG GTTGTATCAG CAATATGTGT CTGTCAAAT TAGTGACAAA GGTAGTAGAA	17460
GAAAGATAAA GAAATAAATC AGCTTCAGTA GGTATCTGGA AAATTTGATT TTATAGAGAA	17520
GCCTTTTGTT ACAAACTCAA TATACTATCA ATAAATAATA TTATAGAAGC AACATAATT	17580
ATAATTTTAC CTATCTGCAT CATTCTATTT CGAACTCTAA ATATATGTTT TATCAAAAAT	17640
ACTTGGACA CACACATTAT AGGAATTAAC GTTTTTGAAA TTGAAAAATA TCCAAATAAA	17700
TAACTATAA ACAACAAAA TAGAACTATG TTATATTCT TATTCAAAAC ATTCCTCCCT	17760
ATATATTTTT GATTACCAAT CTTAATCATT TACAACTACA TTCTAACAAA CTATAAAGC	17820
GTTTGTGCGA TTGAATTTAT CAAGCAAGCG ACCAACCAGT TCATCTTTTT TCTATTTCTG	17880
CCAATATGCG TGACAGGTAA TAATGATAGC CAAAAATAGC AAGAGCAAGC AAGACGATAA	17940
GAGCTCTTAC TCCCAAGCTG ATGGCAAGGA TAGGGGAGAG AGACTGAACC AAGAATATGC	18000
TCCCAATTAC AAGGGCCATC AGGATTGCAC TATAAATAAA CAATAAACT ATGGCGACTA	18060
TGCCATTTGA ACGATTCAAC AGGTCCGTAA TGCTACTCCA ATTGATTGAC AGATTTTAA	18120
CGTCCTTAAA GTAATGGTGG CAAGAAAGGA TGACACTGGC AATGATCCAG ACTACAAGAA	18180
GGTAAATCAT CGAAATGATG GGCAAGCCTA GATATAGAGA AAGACCAAGC AAAGTCAGAA	18240
CTGGTAAAAA GGAAGTGGACA GCATATATAA TCCAAAATTT CACTTTCACA TAACGAGCAA	18300
AGTCAAAGGG TAAACTCTTA AGAAATCAA CATTTTCCCT CTCCAAGGAC AAGGCAATTG	18360
AATGCAGGCT GGTGATATTG TTATTGACAA CTGCTATAAA GAGAGCTATA AAAACAAGG	18420
GTAACCAAGTA TGGAGGATGA ATGTCTGGAA CTATCTGAGA ATCTCGGATT TTGGAATCA	18480

693

GACCGATCAT CATGAGATAA GGAAGGAAAG CACTTGTAAG AAGCACTGTA ATCACGCCAG 18540
 TCCCTGTGCC CAAGAGGGTG AGGTGGTAGC GTAAAACCAT GCGAAAAAAT CCCTTTTGTAG 18600
 TGGTTGAAAT TCTCTCCTTG CTGCGACGTT CTTTTTTGAC CTTCTCCTCA CTATTAAGCA 18660
 GGATCACGTC ATAAAAACGA GGAAGGACCT TCTTTTGGT CAGATAAAGC AGGAAGAGAG 18720
 TTAGTCCTAT CCAAGCGAGC AGACCCACTA AGGCTTCTGT CGAAAAAGGC TCCACTGCTA 18780
 TTTTGTAAGA GATATGAAGA GGATAAAGGA GAAATGGAAT GTCTCTAACT TTGTCAACAA 18840
 TACTTCCAAA AGTCGACTGA AGAAAGAAGA TAAATATTAA AGGTATGAGA ACTCCTATCC 18900
 CAATCATCAC ATTCGAAAAA ATAGACTGAT ACTTCTGAA GACCCTAGTT TGAGCCAAGA 18960
 AATGCACTGC CACTACCATC ACTAGAGCCA CAGAGACAAA TAATAAGGTC AAGGACAGTA 19020
 GCATCAAAGG CAAACCCAGC CATAGAGAAG GAGCTAGCCT AATGTAGAGG ACCAGAAAAT 19080
 AAGCTAGGAT TGGTACAATT CCAGTTAGAG CTGGCAAAAG GACAGACAGT CCTTTAGCAA 19140
 TTATAATCTC TGATTCTTTA AAGGCATAGG GCCTATACGA TACCAAATCC TTAATCTCAT 19200
 AAAAGACATT GTAAAAGGCC GTTAAAGAAG TTGAAAAGGC AATCACTAGT AAAATAGCAA 19260
 TCATCGAGCT AAAATAAATA GGTATTTCTT CAAAAGGAAA ATGAATGGCT ATATTACTAA 19320
 AACAGATGAT CATCAAGAGA CTGGAAAAAA TGTAAGAACT TAAGACTCTA GCGGAAACAT 19380
 TTACTTTTTT 19390

(2) INFORMATION FOR SEQ ID NO: 87:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 18436 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

CCGAGCGTCG TTACAGACTT TATCAAGATT GGACGCAAGA AGAAATTCAA CATATAAAGG 60
 AAAATATGGC ACAATCTCCA TGGCATACTC ATTACCATGT TGAGCCAAAA ACAGGACTTC 120
 TCAACGACCC AAATGGCTTT TCTTACTTTG ATGGCAAGTG GATCCTCTTT TACCAGAATT 180
 TTCCTTTTGG TGCAGCCAC GGTTTAAAT CTTGGGCACA GCTAGAAAGT GATGATTTGA 240
 TTCCTTTTAA AGAACTGGA ATCAAAGTTT TACCAGATAC TCCATTAGAT AGCCACGGTG 300
 CCTACTCTGG TTCTGCCATG CAATTTGGCG ATAATTATT CCTATTTTAT ACAGGAAATG 360
 TTCGCGATAA AAAGTGGATC CGTCACCCAT ACCAGATCGG TGCTTTGATG GACAAGGAGG 420

694

GTAAGATTAC AAAGATTGAC AAGATCTTGA TTGACCAGCC AGCAGACTCT ACTGACCACT	480
TCCGCGATCC ACAAATTTT AACTTTCAGG GTCAATATTA TGCCATTGTC GGCGGACAAG	540
ACTTGGAGAA AAAAGGTTTC GTTCGTCTCT ACAAGGCTGT CAATAACGAC TACACAAACT	600
GGCAAGCAGT TGGCGACCTT GACTTTGCTA ACGACCGTAC TGCCTACATG ATGGAATGTC	660
CTAATTTGGT CTTTGTAGAG GAACAACCTG TCCTTCTCTA CTGTCCACAA GGATTGGATA	720
AGAAAGTTCT AGACTACGAT AATATCTTTC CAAATATGTA TAAGATCGGG GCTTCCTTTG	780
ACCCATAAAA TGCCAAAATG GTAGATGTGT CTCAACTTCA AAACATGGAT TACGGTTTCG	840
AAGCCTATGC AACTCAAGCC TTCAACGCTC CTGATGGGCG TGCTCTAGCA GTTAGCTGGC	900
TTGGTTTGCC AGATGTTTCT TACCCATCTG ACCGTTTTGA CCACCAAGGA ACCTTCTCTT	960
TGGTCAAGGA ACTCACTATC AAAGACGACA AGCTCTACCA GTATCCAGTC GCTGCTATTA	1020
AGGACCTTCG TGCTTCTGAA GAAGCCTTCT CAAACCGTTC CCAAACCAAG AACACTTACG	1080
AACTTGAAC TCACTTGGA GCTAATAGCC AGAGCGAGAT TGTCTTACTT GCTGATAAAG	1140
AAGGTAAGGG ACTTTCAATC AACTTTGACC TTGTAAACGG TCAAGTAACA GTGGATCGTA	1200
GCCAGGCTGG AGAACAGTAT GCCCAAGAAT TTGGGACAAC TCGTTCTTGC CCTATCGAGA	1260
ATCAGGCTAC TACTGCTACA ATCTTCATCG ATAACCTGT CTTTGAAAT TTCTATCAATA	1320
AAGGAGAAAA AGTATTTTCT GGTCTGTCT TCCCACATGC GGACCAAAAT GGTATCTGA	1380
TTAAATCTGG AAACCAACT GGAACCTACT ATGAATTAGA TTATGGTCGC AAAACTAACT	1440
GATGTCGCCA AACTTGCAGG CGTCAGTCCT ACTACCGTTT CTCGGGTAT CAATAAAAAA	1500
GGGTATCTAT CTGAGAAAAC CATCCAAAAA GTCAATGAAG CCATGCGAGA ATGGGGCTAT	1560
AAACCAACA ACCTGGCTCG TAGTCTGCAA GGAAAATCAG CTAAGTTAAT CGGCTTGATT	1620
TTCCCAATA TTTCCAATGT TTTCTATGCA GAATTGATTG ATAAATTGGA ACACCAACTC	1680
TTCAAAAATG GTTACAAGAC CATCATCTGC AACAGTGAAC ATGATTCTGA GAAGGAACGC	1740
GAATACATCG AAATGTTGGA AGCCAATCAG GTGGACGGCA TCATTCTTGG TAGTCACAAC	1800
CTAGGAATCG AAGACTACAA TCGTGTGACA GCGCCGATTA TTTCTTTGA CCGAAACCTA	1860
TCGCCAGACA TCCCTGTCGT CTCCTCTGAC AACTATGCTG GTGGGGTTCT TGCTGCCAA	1920
ACCTTGGTCA AGACAGGTGC CCAGTCTATC ATCATGATTA CAGGGAATGA CAATTCTAAT	1980
TCGCCAACCG GACTGCGCCA CGCTGGTTTT GCATCCGTAC TCCCAAAAGC TCCTATTATC	2040
AATGTTTCCA GTGACTTTTC TCCCGTCAGA AAAGAAATGG AAATCAAGAA TATCTTGACC	2100
CGGGA AAAAC CAGATGCCAT TTTTGCTTCG GATGATTTGA CAGCTATTCT GGTCAATAAA	2160
ATCGCTCAAG AATTGGGCAT TTCTGTCCCA AAAGAGCTCA AGGTCATCGG CTATGATGGG	2220

695

ACCTACTTTA TCGAAAATTA CTACCCCTCAA TTGGCTACTA TCAAGCAACC TTTGGAAGAG	2280
ATTGCTTGTC TCACTATTGA TCTTCTCTTG CAAAAGATTG AAGGCAAGGA AGTCGCCACA	2340
ACTGGTTACT TCTTACCAGT TACGCTATTA CCAGGAAAAA GTATTTAAAC ACAAGAAAAAC	2400
TCAGACCGAT TCGTCTGAGT TTTTATGATC TTAAATTTTC GAGATAGCGC TGGGCTGTCT	2460
CTAGGTAA GGTTTTATCT GAGATGAGGC GCTCTACTAG GGGAGCAACT TCAGATTAC	2520
TAGCCCCAGC TAGGAGAGCT AGGGATTGG CCTGTAGTTT CATGTGGCCT TGCTGGATGC	2580
CCGTACTTAC CAAGGCTTTG AGGGCTGCAA AATTTTGAGC AAGACCGATG GACACGATAA	2640
TCTGGGCTAA TTCTCTGGCA GAAGGATTTC CTAGTAGATC ATGACTGAGA ACTACACGTG	2700
GGTTGAGGCC GATAGAGCCA CCCTTAGTCG CTACAGGCAT GGGCAGGGTC ATCTCACC GA	2760
CCAATTCTTC TCTTTCAAGG TCCAGCGTCC AGCAGCTAAG ACCTTGATAG CGTCCATCTC	2820
GACTGGCAAA GGCATGGGCC CCAGCTTCGA TGGCACGCCA GTCATTACCA GTGGCAATCA	2880
AAATCGCATC AATACCATTA AAAATTCCTT TATTATGAGT AGCAGCTCGG TAAGGATCAG	2940
CCTGCGCAA CTGACTAGCC AACGCAATTT TCTCCGCAAT CTCTCGTCCT TGATCCTTTT	3000
GGCGGCTCAA GTAGCGAAAG GCGATGCGAC AGCTTGCACT CACCAGAGAA TCGGTGCGCT	3060
AGTTGGACAG GATTCCCATG AGACTCTGTC CCTGACTGAG TTCTTCTAAG ACTGGTTTCA	3120
AGGCTTCCAG CATGGTGTG AGCATATTGG CACCCATGGC TTCCTGGGTA TCGACATGAA	3180
TATAAACAAC GAGAAAGTCT GGTTCGCCTT TTATCTGCTC GACATGCAGA TCACGCGCCC	3240
CACCTCCACG TTAAACGATA GAAGGATAGG CTTGATTGGC AAGCTCCAAG AGCTCCGCTT	3300
TCTTGCTGGC AATCTTCTCT TCGCTAGTT TAGGATTAGC AACTTGATAA AGGGCTACCT	3360
GCCCAATCAT CTGTCGCTGA TGGACTTGTG CAGTAAACC ACCTGCACGC TTGATGATTT	3420
TGCTGGCATA GCTGGCCGCC GCAACCACAG AGGGTTCTTC TGTCACATAG GGAACGGTGT	3480
ATTCTGACC GTTGACAAGT ACCTCCGGAA CCAAGTGAATA AGGCAGAGAA AAAGTTCCCA	3540
CTACATTCTC ACTCAGCTGG TCTGCCACAG TCACGCTCAT CTGTTTCATCC TTCTCCAGAC	3600
TAGCTTGTCT CTCAGGACTA AGGAGCGCCT GAGCTTTTAA CAGCTCGAGG CGCTCTTGGT	3660
ATGATTTTTT AGAAAATCCA TTCCAACCTA TCTTCATTAT TTTTCAACCT TGCTATAACG	3720
GCCTTGGTGG TCGAGAATTT CAACCAAGGC AAAATCTTGA TTTTCATAGC CAGCAAACTG	3780
GGCAGAGTTA GTTTCATCCA AGTTTACTTC CTCAAAAAAG ACCTTTTCAT AGTCTGCAAC	3840
GGATAGGGCA GTTCGTTGGT TGAGCTTGT CAAACGGTCT TTATCCAAAT AAGCTTCATA	3900
TCCTTCAACC AATTCACCAC TGAAGAACTC AGCCACAGCT CCACTTCCGT AACTATAAAG	3960

696

GCGATTTTA TCCCCAGCTT TCAAGCTATC TGTATTTTCC AAGAGAGACA AAAGTCCAAG	4020
GAAAAGTGAA CCTGTGTAGA TATTCCTTAC CTTTGTACTG TAGAGAATAG ACTGGTCAAA	4080
ATGCTTTTGT AAGAGGTCTT TTTTCTCTTG AGGCAGGCTC TTATCCATGA TTTTMTTCAA	4140
GCCTTTTAGC GCTAATTTAG GATAAGGCAA GTGGAACAA ACAGCCGCAA AATCATCCAA	4200
AGTAAGCTGG TAGCGTTTTT GATATTCAAG CCAAGTCGTT TTCAAACAT CCAAGTATTG	4260
TTGGGTAGAA TAGACACCAT TTACATAAGG AGTTGTCGAG TAATTTGGTC GCCAGAAATC	4320
CATGATGTCA CGGGTCTGAG CTACATTGTC ATTATTAAAG GCCATCATGC GTGGATTTTG	4380
TGTAATCAAC ATAGCTACAC TTCCAGCACC TTGAGTTGGT TCTCCTGGAG TTTCAATACC	4440
GTATTTGGCA ATATCACTGG CAATGACCAA GACCTTGGAC TCCGGAGAAT TTTCCACATG	4500
CAATTTGGCA TAATGGAGGG CAGCAGTCGC TCCGTAGCAG GCTTCTTTAA TCTCGAACT	4560
ACGAGCAAAG GGCTGGATGC CCAGCAAGCC ATGCACAAAG ACGGCCGAG CCTTACTCTG	4620
GTCAATTCTT GACTCGGTCG CCACAATGAC CATGTCAACT TCTTGTCTTT CTGCTCAGT	4680
TAAAATAGAG TCACTAGCAC TGGCCGCCAA GGTACGATA TCCTCAGTTA GGGGCGCAAT	4740
ACTCAATTCC TTGAGTAAGA GTCCTTTACT TAATTTTCA GGGTCAATTC CCCTCGCTTC	4800
TGCTAAGTCT TGTAATTTCA AGACATATTG ACTGGTCGCA AAACCAATCT TATCAATACC	4860
GATTGTCATA TTTACCTCTG TTTTATCATT CATGTAAAAA ATCGTTCTAT ACTATTTTAT	4920
CACAAATGGC AGTAAAGAG AGAAAAAGA CTTGATTAC CAAATCAAGC CTCTTATTGG	4980
TCATCATTTT AAAGAATGAT TAGTTGCTAG AGAGTTCACC GATATAAGTA GCTTTATAAG	5040
CTCCATTAC AGTTATCAGC TCCTGGAGGA TCAAATTTCC TGAGTAAGTC CTCCCACCT	5100
CATCTACAAA TTTTGTATAA AACTGACTGG TCGGAATTTT TCTGACATCC TTATCAAATG	5160
TCTTATCAAG TGTTTTACTA ACCTTCTCAG CAATCAATTG ATGCTCTTGC CATCCACTTT	5220
GAAACTCTGA GCCCGAATA GAAACCATGA CTGGGATAAA CAACAAGGTC AGTAGATTTA	5280
CAGACAATAA GGAAAGTAGT AGACTTCCTG CAAACTAGA ATCCTAGTTC ATGATTGATA	5340
ATACCAGCAA TCAAATTCAT TCGTAATCCG AAGCGTTTAC GATGATTTTC ATAGGTTGTT	5400
GAAAACATTT TAAACGTTTT TACTTTGGCA AAGATGTTCT CAACCTTGCT TCTCTCCTTA	5460
GATAGCGCAT GGTACAGGC TTTATCTTCA GCTGTTAGCG GCTTGAGTTT GCTGGATTTA	5520
CGTGGAGTTT GTGCTTGAGG ATATATCTTC ATGAGCCCTT GATAATCACT GTCAGCCAAG	5580
ATTTTACCAG CTTGTCCGAT ATTTCTGCAA CTCATTTTGA ACAACTTCAT ATCATGACTA	5640
TAGTTCACAG CGATATCCAA AGAAACAATT CTCCTTGAC TTGTGACAAAT CGCTTGAGCC	5700
TTCATAGCGT GAAATTTCTT TTTACCAGAA TCATTCGCTA ATTGTTTTTT AGGGCGATTG	5760

697

ATTTTACTT CCGTCACATC AATCATATC GTGTCCTCAA AGCTGAGAGG AGTTCCTGAA	5820
ATCGTAACAC CACTTTGAAC AAGAGTTACT TCAACCCATT GGCTCCGACG GATTAAGTTG	5880
CTTTCGTGGA TACCAAAATC AGCCGCAATT TCTTCATAAG TCGGGTATTC TCGCACATAT	5940
AGAAAGCGTT ATCAATTTAT TTATCTCATT TTTCAGAAAA TTCTTTTATT TCTGTAAAGT	6000
CTACGATACT CGATGTGTTT TTATATAATG ATAGAGTCTG AGAATCACTG TTCCGCTAGC	6060
CATTCCAATA GAGATTACCA AAGCCAACAT GACAACCAAG GTCGCACTTG CCAGTGCTTT	6120
ATTATAGTCC CCTGTCACAA AAAAGGCAGT TGTTCGGTAG GAGAGATAAC CTGGAACGAG	6180
CGGTGCCAAA ATGGCCAAGA TAAAGACCAC AGCAGGTGTC TTATAAAGAA TACTTAAAAAT	6240
CTGGCTGACA CAAGAACCAA TAATGGCTGC AATGAAGTA GCTACAATGA CATTTGGTCGG	6300
TTCCTTGAGC AAGAGATAGA TTAGCCAGAC AGTCATGCCC AAAATCCCTC CAGGTAAGAG	6360
CATAGACCGT TGCACATTGA GTACGATTAA AAAAGTGATA ATGGCAAGAA AACTTGCTAC	6420
TGCTTGTAAT AAAAAGGTTG TTAGTGTCAT ATTAGTTCAT CAATACCAAG GCGACAGAAG	6480
TTCCTGCCCC TAAAGCGAGG GTAATGAGCA GGGATTCAAA CATCTTACTC ATACCAGAGT	6540
TTATGTGGTT GGTACATAATA TCACGGACCG CATTTGGTCAA GGCAATACCT GTTACAAACG	6600
GCATGACCGC ACCAGCTATA ATCAAATCTG CCGTTGAAGG AAAACCTGTG TAGCGAGCCC	6660
AAAACTGGGC AATTATCCCA AAGACAAAGG CTCCAGCAAA GGCTGTCACA AAGGGAATTC	6720
GGATAAATTT TTCCACATAG AGGGAAAAGG CAAAACCAAA TAAGGTCGCC ACTCCTGCCC	6780
CAAGTGCGTC GTAGATATTT CCGCTAAACA TAACTGAAAA GAAAGGAGCA CTAAAGGTCG	6840
CAGCCAGAGT TACCTGCAAC TTAGTATAGG GAAGGGGTTT GGCTTGCAAG GCCGTCAATT	6900
GCTTAAAGGC TGTTCCTAAG TCAATCTGCC CCCCAACTAG CTGACGAGAA ATCTGGTTCA	6960
CATCGCAGAC TTTTTCGATG TTATAAGAAG AGGAGGTCAC GCGCTTCATG CGCAAATATT	7020
GGTATTTTCA ATAGAGAAAA AGATAGCGGC AGGCATGGCA AGGACATTGC AATCCACAAT	7080
CCCCTGCGAA TGCGCGATTG GAATCATGGT ATCTTCTACA CGATGGATTT CTGAGCCACT	7140
TTTAAGGAGA ATAGTCCCCG CTAGCATAAT CACATCAATG ACGGCATTTA ATTCTTTTGA	7200
TTCTTCCATG CTTTCCTCCT TTTATCAACT CCCTCTATTG TATCACAAAT CCGGACTCAA	7260
AAAAAATCTT TGCCATGAAA TCATGACAAA GATTGATTAC TCATTTTGAT TATCCATCTG	7320
CTTTTAAGGA GTAGCTGAAG TTGTTTAGG TTTGTAGATT GAAATCTTGA CTCTAGTCTT	7380
ATTGAGGTCT ACCTTTTCAC CTGCTCTAGG ACTTTGTTCA ACAACCATGC CTTCTGCACT	7440
ACCTGCAGGC GCTGTCGTCA CTTCTACAAC TTCTATATTA GCTTCCTTAA TCCCAACAAT	7500

698

TTGAATCAAA TTGTTCTTAG TAAACTCCAA GCTAGAACCA ATGTAACCTCG GCATGGCAAC	7560
ACTTGTAAGT TTTTGTAGCTA CTGTCAAGAC AATTGAGTA GGTTTACTCA CATCATAAGT	7620
CGTTCGGCA CCTGGACTTT GTTTCATAAT CGTTCCTGGT TCGCTTTCGC TGGACTCTTC	7680
TTCTCTATC TTAATCAAAT TCTCAGGAAC CTTCTTCTGC TTGAGTTCTG AGATTACTTC	7740
TGTAGAGTTC CGTCCAATAT AGTTCCCTAA TTGAATCGTC GTAGCTTTTT TAGCTACTGT	7800
CAAAACAATT TGAGTTGCCT TGCTCAAGTC ATAGGTCGTA CCTTCTGGTA GACTTTGCCT	7860
CAGGACCGTT CCAGCCTCAC TCTCATTCGA CTCTTCTTCC TCAATTTTAA TCAAATTATC	7920
TGGAACTTTT TTCTCTTTTA ATTCCGCAAT GACATCAGAG GATTTCCGAC CGACATAATT	7980
ACTAATTTGG AAAGATTGCT TGCCTGATGA GACAACCAAA TTGATTTTCG TTCCTTCTTT	8040
TCGACCAGTT CCAGCGCCAG GATCTGTACG GATAATCCGC CCTTCTTCCA CCTTTTCACT	8100
AGCCTCTGTC TTCTCCTCAC CAATCTCAAA ATTGGCTTTT TTGAGCGTTG CCTTGGCCTC	8160
TGCAACTGTC TGACCTGCCA CATCTGGAAT GGCAATGGTT GCAGGAGTTC TGGATAGTAT	8220
CCAAATAAGA GAAGCTGCCA CCAATACAAG GCTGGCCAAC AAAATCAGGT AACGCATCTT	8280
AAATCTATGT TTTTTCGGTG CTTGTGGTTG GTAAGTTTCC TCTGTCACAG CCTGGCTTGG	8340
GTTTTTGATT GATTTGTGTT CTGTTTGCGC TTGAACCTTA GGAATAGATG TCAAGGTAAT	8400
CTGAGAAACC TTCGGCAAGG TCTTGGTATC TGCCTTGCTC GTTTCATCAA AGATTAACTT	8460
ACTTTCATTT CTACGATTGT AGGACAAGCT ACTAGACAAG TCCACATACA TCTCTGAAAC	8520
CGAGCGGTAG CGATTGGTCA ACTTTTTAGC AGTTGCCTTG ATAATAACAT TTTCTAAAGC	8580
CTGAGGTACA GATGGATTTT CTGCAATAAC GGACGGCAGG GGTTCCTGGA AATGCTGGAG	8640
GGCAATGGTC ACCGCGCTAT CCCCCTCATA AGGGATATGG CCTGTCAGCA TCTCATAGAA	8700
AATAATCCCC ATGGCATAGA TATCACTCTG CACAGTCGCC TTCGAACCAC GCGCCTGCTC	8760
TGGTGACAAG TAATGAACTG AGCCCAACAT CGAGTTAGTC TGGGTCAGAC TTGTCTCTGC	8820
AAAGGCTACA GCAATCCCAA AGTCTGTGAC CTTGGCAGTC CCATCTGGTG TCAAGAGGAT	8880
ATTTTGAGGT TTCAAGTCCC TGTGAACAAT TCCTCGAGTA TGGGCCAAGC GCATAGCCAA	8940
GAGAATTTGT CCCATGATAC GGACTGCTTC TTCATTAGAA AGAGGATAAT GTTCCTTGAT	9000
ATAGCGTTTG AGGTCCAGTC CAGCCACATA CTCCATAGCT AGGTACTGTT GACCGTCTTC	9060
CTCGCCAATA TCTGTTATCC GAACGATATG AGGATGGTCT AGATCTGCCA TAGCTCTCGC	9120
TTCACGCTGA AAACGAGCTA CAGCTATCGG GTCCGCTCTG TAGTTGGTCC TCAGAACCTT	9180
CAC TGCCACT TCTTCCCAT CTAAGATTAA GTCTTTGGCT AGGTAGACAT CCGCCATACC	9240
TCCTCGACCA ATCTGTTTGA CAATCCGATA GCGTCCGGCA AAAATCTTGC CGATTTGGAT	9300

699

CATTCTGCAT CCTCCTCGTT CATAGAAACA AGGGCAACCG TAATGTTGTC TAAACCTCCT	9360
GCATTGTTAG CAAAACGAAC AAGTGTCTCC GTTTTATCTG CTAAAGGAAT ATCACTGGTT	9420
ACAATATCAC GAATCTCACT GCCTGAAATC ATGTTGGTCA AGCCGTCCT ATTGAGCAAG	9480
AGATAGTCAC CTGACTCAAG GATAACTGTC CCAAAATCAG GCTGAATTC ATCTTTTTC	9540
CCAATAGACT GGGTGATAAT ATTTTTTTC GGATGAGCTT CTGCCTCTTC TGGTGTCAAT	9600
TGACCAGCCT TGAGCAATTC ATTAACCAAG GAATGATCGC TCGTCAACTG ATGGTATTCT	9660
TCTCCACGAA TCAAGCCGAT ACGCGAATCA CCAATATGAG CATAGATAGC CTGATTATCA	9720
ATAATAGCAA GGACTTCCAA AGTAGTCCC ATGCCTCTGT AAGCTTCATC CTGACCAAGC	9780
TGGTGAATCT TTTGATTTC AATTCTAGG TAATGGGCGA ACCATTCACG CACTTCATTG	9840
ACTGTATCGA TCTGGGTATC AACCAGCT ACACCCAGGT CTGTGACCGC CATTTCACTA	9900
GCGATATTC CTGCGCATG ACCTCCATC CCATCAGTA AAATAATCAT GGTACGTCCA	9960
GCTCTATTGA CATAGTGGTT GACATAGTCT TGGTTATTG TTCGTTTCTG ACCAACATCT	10020
GTTAATAATG AAATTCCAT GTGTCAGTTC CTTCCCTAATC CGATATCTTG CGAAATTGAC	10080
TGATGAAGAA TCCATCACTT CCATACAATT CAGGTGTAAT GAGGATACAG CCGTCTTTCA	10140
TGATATCCTT ACATTCATGT TCTAGTTTTC CCTGCTCGAA CTCGGGATGA CTCTCTAAAA	10200
AGGCCTTAAC GACTTGAAAA TTCTCCTCTG AGACGATAGT GCAGGTGCTA TAAGTTATTA	10260
TACCACCTTT GCCTAGTATT TGACAAACAC TACCTAATAT TTCTAACTGA ATTCCTGCA	10320
AGGACGCGAA ATCTGCCGTT TCTTTATTGT ATTTGATATC TGGTTTTCGG CGCAAAAGAC	10380
CGATTCCTGA ACAAGGAGCA TCCACCAAAA TCTTATCAAA GGAATCCTGG TCAAAAAACT	10440
CATGCACCTT TCTGGCATCC AATTTTTCGAG TTTGAACCCG ATCTTCAACT CCCAGACGTT	10500
GGGCATTTTC TTGAATTAAA TCCAACCTGT GGTGCTACAA GTCCAGAGCA GTAACCTGAC	10560
CTGTCGTAAG ATAAGAGGCT ATATGGGCTG TTTTCCACC TGGAGCCGCA CAGGCATCAA	10620
GCACTCGCTC ATCACCTTGT AAATCAAGCG TCGGAGCAAC CAGCTGACTG GACTCATCTT	10680
GGATGGTAAT GGCTCCATCC GCAAACAAAT TATGCCCTGC AAAATGCCCC TGCTCCTTAA	10740
CCAGACCAGT GGTGCTAAA AGGGAATTAT TCGCCTCAA CAAGGCTTGG ATTTCTCTT	10800
TTGACTTAG GTCTGTTACA CGAATACTGG CTTTGTTCG CACTAACAGG CTTTCAAAGA	10860
TGGCTTTTGC TCTCTCCTCT CCGTATTCTT CCTTGAGTTT GGCAACTAGC CAACTGGGA	10920
GAGAATAGGC AATGGAGTCA CGCTTGTTTT TTCGCTTGAT GCTAGCAATA TCTGGCCAGC	10980
CTTCACGCAA GATACGGCGA AGGACAGCGT TGACCAATTT TCACTGCCT TTTTACGGA	11040

700

GTTTGGCCAA TTCCACTGCT TCATTAACCA CAGCATGATC TGAATCTTG TCCAAATAGC	11100
GGAGTTGGTA GGCAC T CATG AGAAGAAGGA CATAGAGCCA GCTGTCTAAC TGGTCTCTGT	11160
CTTCGATAAA GTGGGATAGG TACCATTCCA GAGTCAGTTT ACGGGCTACC GTTCCATAGA	11220
CCAGCTCGGT CACTAAGCCC TTGTCTGCTG CCAAAAGTTG ACTTCCCTTT AGATGCTTAT	11280
TTAAGGCGAT ATTTGAATAT GCTTGGTTCA CAAAACATC CTCTAGCACT GCTAGAGCTA	11340
AAC T TTCTAGC CGTTTCTACT TTAGTCACCA AATCGTTCTC CTACAGTCAA TGTACGTCCA	11400
ACTCCGTTGA GGAAGGAAGC AATGTCCATC TTAGGCTTAC CAGCTGGCTG CACTTGT T TG	11460
AGGGATAGAG CCCCTTCAGC CGTTGCGACA ATCAATCTT TCTTGCCGAT AGAGAGAATC	11520
TCACCTGGAT TTCCCTGACC TTCTACTGGT AGGCTTCAT AAATCTTAA GCGGTCGCCC	11580
TTAAGGAAAG TATGGGCAAC AGGCCAGGGG TTCATTCCAC GAATTGGTT AAAGAGTTGA	11640
CGATTGGTTT TGTTCAGTC CAGTTT T TCT TCCTCTGGCT TTATATTGG AGAGAAGGTA	11700
ACCTGACTCG TATCCTGCGG TTCAGGTTTG ATATCACCAG CAATATAGGC AGGCAGAGTG	11760
TCCAAAGCA AATCAGGACC AACTAGCGCC AATTTT T TCAA ACAAGGTGCC AACATTGTCC	11820
TCATCTGTGA TCGGAATGCT GCGACGAGAA ATCATATCTC CTGCATCCAT TTCCTTAACC	11880
ATTTCCATGA TGGTCACACC AGCTTCCTCA TCCCCTTGAA TCAAGGCATA ATGGATAGGC	11940
GCACCACCAC GGTGTCTAGG AAGGAGGGAG GCATGAACGT TGACAGCAAA GTCCATGCTA	12000
TCAAGGAGTT TGCTTGGGAG AA A CTGCCCA AAAGCAGCAG TCACAATTCC ATCTGCTCCT	12060
AGCTTCATAA GATCTTCCAT CTCTGGACTT CCAGATAATT TTTCAGGTTG GTAGATAGAT	12120
AGTCCTGCTT CCTTGGCAGC CTGCTT G ACT GGGGT T TCTT GGATAACTTT TTACGACCA	12180
ACAGCACGGT CTGGCTGGGT CACAACGGCT AGAATTTCGT AACGGTCATC TGTCAAAAGT	12240
CCTTTTAAGA CTGTTGCTGA AAAGTCGGGG GTCCCCATAA AGATTAGTTT TGTCATATCT	12300
TCTCCTTCTT ATAAAAATTG CTGCGGCTCA TGGTCAATGC TGAGACGGAG CTCACTATTT	12360
TCCCGTTCTT GAGTCAAGGC TAA A ACCTGG TTGAGGGTCG ACCCCAGCTC ATCTTCTAAA	12420
CGGTATTTAA TTAAATCTG GTAATGATAG AGTTGTGGG TACGGGCAAT CGGTTTGGC	12480
GTGGCCCCA GAATGGGACT GGTCTCTGAC AAGCCTGACC GCAAAATGTT CATGACTTCA	12540
TAGGCACGTT TGA A ACCTC TTCTTCTTTC TTGTGAGAAA GGGTAATACC AATCGTGAAA	12600
TAGTAAGGTG GATAGCCGAG TTGTCGCTG ATTCCCATTT CATAGGCATA AAAGCCTTCG	12660
TAATCTTGAT CCTTGGCAA TCGAATAGCA TAGTGCTGCG GATTGTAGGA CTGTATCAAG	12720
ACTTGACCTG CCTTTTCAGC CCGACCTGAT CGACCTGCCA CCTGAGTCAA GAGCTGGAAG	12780
GTCTCTCAG AAGAACGGAA ATCAGGCAGA TTCAAGGCCG TATCCGCATT TAGAACTCCG	12840

701

ACTAGGGTAA CATTGGGAAA ATCCAAACCC TTTGCAATCA TCTGAGTACC AAGTAAAATA	12900
TCCGCTTCCC CTCGCCCAA CTGGTCAAGC AAGGCTTGGT GACTGCCTTT CTTTCGAGTC	12960
GTATCCACAT CCATCCTCAG AATGCGAGCT TGGGGAAAGA GTTCTGCTAG CTCATCATAA	13020
GCCTTCTGAG TTCCCGTCCC ATAGTAACGA ATACTGCGGC TCTTACAGTT AGGACAGACC	13080
TGAGGAATAT CCTTCGAGAA ACCACAATAA TGGCAGTTCA TAGTCTTGGT ATCCATATGC	13140
AAGGTCAGAG AATATCGCA GTTGGGACAA GTATCCACCG TCCCACACTC CCGACACATG	13200
ACAAAGCTAG AATAACCACG GCGATTGAGC ATGAGAACCA CCTGCTCTTT TTTAACCAGA	13260
CGGTCTTGGG TAGCCTCTAG CAAAGGAGGC GTAAAGTTTG ACGTCTCATT TTGTCCGATA	13320
TAGTCTCGAA AGTCAATCAC TTGAACCTCA GGGATTGTAG CCAAAGGATT GGCACGTTGG	13380
GTTAGACGTA AGTGTGATA GACGCCTTTG CCAGCACGTG CCCGGCTCTC TAAGCTCGGC	13440
GTTGCAGATC CAAGTACCAG AGTTGCTTGA TTATACTGAG CCCGTAAAAT AGTACCTCT	13500
CTGGCATGGT AACGGGGATT GCTGTCCTGC TTATAAGCCG CTTCATGCTC TTCATCAATA	13560
ATCATGACAC CCAGATTTTT CAGAGGAGCA AAGATAGCAG ATCTGGCACC AACAACAAC	13620
TGGGCATCGC CACGCTCCAC CTTGCGCCAT TCATCATACT TTTCACCATT GGATAATCCT	13680
GAGTGAAGAA TGGCTACCTT GTCCCCAAAA CGTGCTATAA AACGCTCGGT CATCTGAGGA	13740
GTCAAGGAAA TCTCAGGTAC CAGCAAAATA GCTGTCTTGC CTTTATCCAG GGCACCTTGG	13800
ATAATCTGCA AGTAAACCTC GGTCTTCCCA CTTCTGTAA TCCCTTGAAG TAGAAAGGGA	13860
GGTTGAGAAC TGCCAATAGA ACTCACAACC GCATCACGCG CCTGTCTTTG TTCTGGATTT	13920
AACTCCAAAG GTCTACTTGC TTCAATTCCT TCAAAATAAG CAGCCGAGCG TTGAACCTCC	13980
TTTTGGACTA TGGTAACAGC ACCTTGATCC ACAAAGAAGT TGACTTGCTC TCGCGAGTAG	14040
GACTCTAACA AGCTAGCCAA GGAAGCGCTC TCTGGATGAG ACAGCAGATA ATCTCTCAGT	14100
TCCAACTTTT TCTTGGCACG TGTAGAAATC TCAACACCTT CTAATTGAGC ATGGTCAACC	14160
TCATACCAAG ACTGGGTCTT GACCTTCTTT TGATCGACTG CCTGATAATC CAGACCAAGC	14220
AGGCCTTTTC TAGTCAAACG CATCATTTCA GCTTGCTTGG CAAGGTCTAG TGAAGAAAAG	14280
GCTAGCGAAT CTTCTGAACC AAACAGGCGC ACTCGTTCTT CCTGACTCAA GCCTTCCAGA	14340
GGATAGAGAA TCTTGTGATA GCTAGAATTC AGAAACCCTG GAAGCATGGC CTTGAGGATA	14400
GAGATTTTGT AGGAGAAGAC AGATTTGCGT AACTCCTCAG CCAGCCAGAG TTGTTCTGGC	14460
GTGAGAACAG GAGAAAAATC CAGCACCTCT GCAATATCTT TTAAATCTTG CTCCATCTCT	14520
TCTCCATCTG ATTGGGACTT CAAACCAAGA ACAATCCCTT GAATCAGGCG ATTACCCTTA	14580

702

CCAAAAGGCA	CATGAACCCG	CATCCCAACT	TCCAGCATTC	CCTCAAATTC	CTCCGGAATC	14640
CTGTAAGTAT	AGGGCTGGTC	CGTCTGCATC	AAGGGCACAT	CTACGATAAT	CTTAGCTAGG	14700
GCCATCTTCT	CACCTCCTCC	TTGTCACTAC	ATTCTTGCAA	TAGAAAAAAT	AAGATTGAGT	14760
CCCCCAACC	TTAAATTTT	TCACCATCTT	CTTTTCTTT	AGCAATTGTC	TCTTTGATTT	14820
TCTTTTCTTC	TTCTTCTTTG	CGGCGTTTTT	CTTCTTCGAT	ACGGCGACGC	ACTGCTTCAC	14880
GTTTTCCTTC	TGGATCTGGG	TGAATTGTAA	CGTTTCCTGA	TTCGATTCTT	TCTAAAGCGC	14940
GAAGAGTTGA	TTTTTCAGAC	TTGAAACCTT	GAGTTGCTGG	GGCACCTGCT	TCCAATTCGT	15000
GGGCACGTTT	TGCTTCCAAG	ATTACGAGTG	AATATTTTGA	AGGAACCTTG	TCGAGCAAGG	15060
TATCAATAGA	GGGTTTAAAC	ATCATTTGCT	TGTACCTATT	TTCTAAATTT	TATCGGGTAG	15120
TTGGAGATTT	TGGTAACATC	TCCTGATAGT	GACCAATGAC	ACGATCCACA	CAGAAGTGTT	15180
CTGCTTCAAT	CACACATTTG	ACACGTTTCA	CAGCTAGGGG	TACCTGATCG	TTGACAATCG	15240
CATAATCATA	CTCACGCATG	AGGGCAATTT	CTTCTTGGC	CTTTTCGATT	CGTTGGGCAA	15300
TCACTTCTGC	ACTATCTGTT	CCACGACCTA	CCAAGCGATC	TTGCAATTCA	TCCAATCTG	15360
GTGGTGTGAG	GAAGATAAAG	ACAGCATCTG	GAACCTTTTT	CTTGACCTGA	AGAGCACCCCT	15420
GAACCTCAAT	TTCAAGGAAA	ACATCGATTG	CCTTGTCCAA	GGTTTCATTG	ACATAGGTCA	15480
GAGGAGTTCC	ATAGTAGTTA	CCGACATATT	CTGCGTATTC	CAACATCTGT	CCTTGACGAA	15540
TCAGCTCTTC	AAATCTTTCA	CGAGTACGGA	AGAAATAGTC	AACACCGTCC	ACTTCTCCAG	15600
GACGTGTGTC	GCGTGTGTC	ATCGATACAG	AATATTGAAA	TTGGTTTTCA	GAACCTCTCA	15660
AAATCTCTCT	TCTAACCGTT	CCTTTTCCAA	CCCCTGAAGG	ACCAGAAAAA	ACGATTAGTA	15720
AGCCTCGGTC	TGCCATTGTG	TCTCCTTTTA	GTCATCTGT	GAAATAACAT	TTCTCTAGAA	15780
TAATGGCAAA	AAGCCAGATT	ATCCTTTTACA	GTCTTTCTAT	CTAGTGTAAC	AAAAAAGCAG	15840
TAATTTTTCA	ACTGCTCTTT	CTTATTTATT	TAGCATAATC	TACTGCACGA	AGCTCGCGAA	15900
TCACGGTTAC	CTTGATATTT	CCTGGATAAT	CGAGATTGTT	TTCAATTTTC	TTACGAACCT	15960
TGTGAGCCAA	GATTGTGACT	TTGTGTCCT	TGATTTTCC	TGGATTGACC	ATGATACGAA	16020
TTTACAGTCC	TGCTTGAAGG	GCAAAGCTAG	TTTGCACCTC	TTCAAAGCCG	TTAGCAATTT	16080
CTTCCAAATC	ATGGAGACGC	TTGATGTAGC	TTTCAAGAGA	CTCACTACGA	GCACCTGGAC	16140
GGGCTGCGCT	CAAGGCATCT	GCTGCAGCGA	CGATAACTGC	TATCACGCTC	TCAGCTTCAA	16200
CATCTCCGTG	GTGACTAGCA	ATCGTATTCA	CCACAACCTG	GGGTTCTTTG	TACTTACGGG	16260
CCAATTCCAT	ACCGATTTC	ACGTGGCTAC	CTTCAACCTC	ATGGTCAATG	GCTTTCCCGA	16320
TATCGTGAAG	GAATCCAGCA	CGACGGGCAA	GAGCCGCATT	TTCACCAAGT	TCGCTCGCCA	16380

703

TGATACCAGC CAACTTAGCA ACCTCAATCG AATGGCGCAA AACATTTTGT CCATATGAAG	16440
TACGGAACTG CAAACGTCCC ATAATCTTCA TCAAGTCTGG ATGAAGGTTT GGCGCACCAA	16500
TTTCATAGGC AGCAGCCTCA CCGTATTCAC GAATCTTATT GTCAATCTCT TGACGGTTTT	16560
TCTCAACCAA CTCTTCGATA CGAGCTGGAT GTATACGACC ATCTTTGAGC AACATTTCCA	16620
TAGTCATACG GGCAATCTCA CGACGAATCG GATCAAATCC TGACAAGGTC ACCACTTCTG	16680
GTGTATCGTC GATAATCACA TCGACCCCTG TCAAACCTTC AAAGGTACGA ATGTTACGAC	16740
CTTCACGACC AATAATGCGT CCCTTCATAG TATCGTCTGG CAGATGAACT GTTGAGTTTG	16800
TTGACTCCGC TACATATTCA CCAGCGATAC GTTGCATAGC TTGAACCAAG ATGTCCTTGG	16860
CCATTTTGTC AGAACGTTCC TTGACCTCTT GCTCAGCTTC GCGAATGCGA CTGGCAATCT	16920
CCCTGGTCAA GTTTTCCTCT GTCTGAGCCA AGATAATATC TCGTGCTTCT GCCTGAGACA	16980
GCGCACCAAT ACGCTCTAGT TCTGCTTCTT TTTGTCTTTC GACTTCCTCT AATTGCTCTT	17040
CACGCGCATC AAGGTTTTTC GCTCTATCAG AAATACTTTG TTCTTTTTGT TCAAGTGT	17100
GTCTTTTACT CGTCAAATG TCGTCCTTAC GGTCAAGGCT AGTAGCTCTC TCTGTCAAAC	17160
GACTTTCGAT TTGTTTGAGT TCTTGACGTT CTGATTTGAA TTCAGCGTCC ACTTCTTAC	17220
GGTATTTTCT GGCTTCTCT TTGGCCTCCA ATAGTGCTTC TTTTAAAGA GACTTGCTTT	17280
CACGTTTGGC TTCATTAACA AGTAAATCCG CTTACGCTC AGCTTGTCCTA CGTAAATTAG	17340
TTGCTTCTTG TTCAGCATTT AAAAGCATCA ACTCTGCAGC TTCCTGAGAT GATTTTCATCT	17400
TAGCTGAGAT GCTGACATAT CCAATGACTA AACCAATGAT GACGGCAAAA ACAGCAATCG	17460
CAAGCGACAT GATTTCCATG TTTTACCTC ATTTTATTGT TATCCGAAT GACATACATT	17520
CTTTTACATT CTACCATAAA AAAGTGATTT TCACAAACCT AAAATAGAAT ATGTTTTGAG	17580
GAATTTGGAA CACATTTACC AAAATAAACT TGTGTTTAG AAATAGTAGT TTAGTAGAGA	17640
CTTGAGAAAA AGCCTACCTT TCAATAGACT TAGTAATGAT CTTTAAAGGA CAAGAAAGCC	17700
ACGCTATCTC CATCCATCAT ATAAATCAAG CGATTTTCTG CATCAATACG CCGTGACCAG	17760
GCTCCTTGGT AATCATATTT GAGTGGTTCT GGTTTACCTA TTCCTGTAAA GGGATCACGT	17820
TGAATATCCT TGATTAGTTT ATTGATTCTT TTTAACGTTT TCTTATCCTG ATTTTGCCAG	17880
TAGCAATAAT CTGCCCAGGC ATCTTCTGTA AACTTGAGCA GCATTTCTTA CTCCTCAATA	17940
ACATGGACCT GAGTACTTCC AGCACGAACT TGAGCCATTC CTCGCAAAAC CTTATCAGAA	18000
AGTTCCTTAT TTTGAGCAAT TCTCAGGGTT TCTTGGATAC TATCCCACTC ACTCTTTGAA	18060
AGGACTACAA TGTCTCATC TGGATTTTTA TTGACCACCG TCAAAGGCTC AAATTCATCA	18120

704

TTTACCTTCT TCATGTAGTC CTTTAAATGA TTTCGGAATG TTGAGTAAAG GACTGCTTCC	18180
ATAACCATAC CTCGTTTTC TAGCTCTTTTCCA CTATTATACA CGAAAAGAAA GAAATTGTCA	18240
GGAAGTTGTA CAAGATTTTC TTTTCTATCT ATTTATACTC AATGAAAATC AAAGAGCAAA	18300
CTAGGAAACT AGCCGCAGGC TGTACTTGAG TACGGCAAGG CGACGTTGAC GCGATTTGAA	18360
TTTGATTTTC GAAGAGTATT ATTCGTAAAA AATCTCAAAA AGCCTACCTT TCGGTAGACT	18420
TAGTTTGTTC CTATTC	18436

(2) INFORMATION FOR SEQ ID NO: 88:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7001 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

ACGTAGAAAA ACTATTTCTA TCACAGATAA TATTCGTAT GTTGTGGAG GTATTGAAAT	60
AAACGTCCTA GGTATCTTTC TCAGTCTATG TGACTTACAA GGGAAACTC TTTTCGAGAC	120
AGAAATTTTG AATGAAGATT ATCCTATTTTC AGAAATCAAT TCCACCATTA CCAATATGAT	180
AAAAACAGCT ATAGAGTACG TCCCTTTGGA AACAAAATTA CTGGGATTG GCTTATCAAT	240
ACCTGGACAT TATAACAAAG ACTCCGGAAG TATCATTACA AACACCCCA TATGGGAATC	300
TTTTAATTTA TTAATGTAA TTAAGATT CAATTTTCCT TTTATTGTAA AAAATAATAT	360
CGATTGTATG GCTATAGGAC AATACCTTTT TAATCCACAC AATACCCCG ATAACCTTAT	420
TTTCCTACAC GCTGGATTAG GTATTACAC TTCCTTTTC ACAAAGAAA AAATAGGAGC	480
CTCTAAAAAT CCTTATATCG GAGAAATTGG ACACACCATT GTCGAATTGA ATGGGCAATA	540
TTGTGAATGC GGAAAAAAG GTTGTTTACA AACATATATT TCGGATGCTT GGTTAATCAA	600
ACACGCCCAA TTATTATTTA AAAATTCCCA ACTAACTGTA CTAAAAAGCC TTGTAAAGAC	660
TGAAAAAGAC ATTCATTTAG ACACCTTTT AACGGCTTAT AATTTAGGCG ACTCCGCTTT	720
ACGTCAACAA ATTGATAAAG GAGTCAATTT ATTAGCCACT TCTATTGCAA ATCTCCTCCT	780
CATCAATCCT GCTGATAAAA TCTATATCAA CAGTCAATTG CTTAATTATC AACCTTTCAC	840
TCATGAAGTC AGGGATAAAA TCCAAGACCA GCTCCACTTC GTTCCCTTTA CTCGTAATAT	900
AGAAATTGAA ATTTTACCTT ACAACAAACA TCGTGGAAGT ATAGGAGCTT GTGCATTAGC	960
TATCGTCGCT TTTTTCATAG AACATAGCAA TGTATTACAA GATATTATTT CACCTTAATA	1020
TATTAGAAAT CTATAGACCT GTTTAAATCA ACTATAACCT GTAGTAGATA TCTCGTATTT	1080

705

AGACAATATG AAAACAAGAC GACTTCCATA TAGGAAACCG CCTTCTCGCT ATGTTGAGTG	1140
ATTTATATTA AAATAACTTT TCTTCTAGCT GCATTTTATT ATTATAAAAA CATTCATCAT	1200
AACCCCCAGA ACTTAAATAA CAATTTTAT TCAAGATACA TACTCCTAGA ATAACTTTA	1260
TATGAAATTC TCATTTTGT TTTTACAATT CTCCTTAGTT AAATCTTGT TAATATATGT	1320
TTTACATATA GTATTTAGCG CCACATAGTA CTGAACTCTC TCCAAAAACG GTTATTCCTC	1380
TTTGAATAGG GCGTTATCAC AAGAAAAGCA TCTCCACGTT TCAACTTCAT ATGGCTCAAA	1440
AACAATCAAT TGATGCTAAA ACCTGTACCT AGATGTTTCG GTTCATAAAA CCATGAACT	1500
GTAAAAGTGG ATGAAATTGA TAGCGATAGT CAAATCAAGA GGCATCATAA CTCTAAAAAG	1560
TCACATATA TAAGTTCATC CTCGGAAGAA TATCATTCTA ATTGTTGAAA TGCCTACATG	1620
AAAAGAAACG TCAAATGCTC ATGAAACAAC GAATACAGGT ATCAAACTA TGACAAAACA	1680
AATCCCTAAA TTTACTAAAG ACACTGCTCA ACTTTACACC TGTAATGGT TGTGTATATA	1740
TAAAGTTACA AAGATGTACG ACCACACTGT TGTAAATCAT AGTGTTCGCG AATATATTAC	1800
TGATAGCATT TCTACAAATA CAAGTAAAGA GAGCGGATGA GATTCAAACG AAATATGTCA	1860
GTGCTTTGGC ATTCTAGGCC TTCATATCAT TTAAGAATT CTATAGACAA AATTTTTC	1920
AATACAGACA CTCGTAACAA CTGCTTCATT TTTCTACCA CATATTTAGG AACAGGATAA	1980
GATACAAGAG TATTAATCCA TAGCTCAGTT CTATACCAAT CTAAGACAAA TAAGCTAAAA	2040
AAACGATTGA TAATAAGCAA ATAGATTCCA AATTTTCTCT ATCTGCTCAT TTTAATAAAC	2100
AATACTAGTG TAACTATCCT TCCAGTCAGA AGCTTGTCAG ATCACACCGA AAATCTTCT	2160
AAAATTTATC TCGTTAGGCA ATCAAGCAAA AACTCGACGA TAGTACAAAC ATTATCATAC	2220
AGGATTGACT TCCTAAATTA TATACTTTAG TAAGGTTTTC GGATAAGAAA AAAGGTTTCT	2280
TTTACATTTT TAAACATTCT TTTCTAAGAT GAAAAACAGA ATTTTTCGAT TGTGATTTAA	2340
AGCAACAAGA AGATTTTCAG TATCATCCTA TAGATACGAG CTAATTAAGA AAACTACAT	2400
TTTTGAATAT AAACATAAT AATATAAACT AAATTTTATA GGAGGAAGAC AATGGATTGG	2460
TACGATTATA TGATACAGGC ATCCAAACAA TCACAATCA ACGCAAGCCA TTGGTTTCGC	2520
TATTTGCGAA AAGTTATTTT TGAAGACTAT TCTTATTTAA CAAACCAAGA TGTAGAAAAG	2580
TTGCTAGACT CCAAAGAACT AACCCGTTT CAAAAAATTA GCTTGAAGTA TGCCTTTCAA	2640
GAGCATACTC CAACTCATAA ATATGTGATT TCATTAAATA AACCTGCTAA GTTAACCAAT	2700
GTTCAAAAAT TGATGGAGAA ATACAAACAT GGATAAAATG AAACCGGTCT TCCAAGCCCT	2760
AAATAAGGAA TTAATTCAGG AAAATCTGAC TTTAACAATT ATCTGTGTCG GTGGTTATGT	2820

706

CTTAGAATAT CATGGTTTAC GTGCCACACA AGATGTTGAT GCTTTTATGG CTCTATAATA	2880
TTTGTAGTGG GTAAATCCCC TATGGATATT ATGGAGCCTA TTTTGTGTGA GAAAAAAGT	2940
CCCATATGAC CTATAATGAA AAGCGACAAA ACAACTCAT T AGAAAGAATC ATATGGAACA	3000
ATTACATTTT ATCACAAAAT TACTAGACAT TAAAGACCCT AATATCCAGA TTTTAGACAT	3060
CATCAATAAG GATACACACA AGGAAATCAT CGCCAACTG GACTACGACG CCCCATCTTG	3120
CCCTGAGTGC GGAAACCAAT TGAAGAAATA TGACTTTCAA AAACCGTCTA AGATCCCTTA	3180
CCTCGAAACA ACTGGTATGC CTTCTAGAAT TCTCCTTAGA AAACGCCGTT TCAAGTGCTA	3240
TCACTGTTCA AAAATGATGG TCGCTGAAAC TTCTATCGTC AAGAAGAATC ATCAAATTC	3300
TCGTATTATC AACCAAAAAA TTGCGCAAAA GTTGATTGAG AAGATTCTA TGACCGATAT	3360
TGCTCATCAG CTGGCCATTT CAACTTCAAC TGTCATTGCG AAGCTCAATG ATTCTCACTT	3420
TGAGCATGAT TTTTCGCGTC TTCCTGAGAT TATGTCCTGG GACGTTGAAA CAGTCCGGGG	3480
AGTGACTGTT TCAATCGGGA GATGGAGATG AGCTTTATTG CGCAAGATTT TGAAAAGCTC	3540
GATATCATCA CTGTTCTTGA AGGTAGAACA CAAGCTGTCA TCCGAGATCA CTTTCTTAAA	3600
TATGATAGAG CCGTCCGATG TCGCGTCAAA ATTATTACTA TGGATATGTT TAGTCCTTAC	3660
TATGACTTAG CTAGACAACT TTTCCCGTGT GCTAAAATCG TTCTTGATCG CTTTCACATT	3720
GTACAACATC TTAGCCGTGC TATGAGTCGT GTGCGTGTCC AAATCATGAA TCAGTTTCAT	3780
CGAAAATCCC ATGAATACAA GGCTATCAAG CGCTACTGGA AACTCATTCA ACAGGATAGC	3840
CGTAAACTCA GCGATAAACA TTTTATCGC CCTACTTTTC GTATGCATTT AACCAATAAA	3900
GAGATTTTAG ACAAGCTTTT GAGCTATTCA CAAGACTTGA AACATCACTA TCAGCTCTAT	3960
CAACTCTTGC TGTTTCACCT TCAGAATAAG GAACCGGAGA AATTTTTCGA ACTTATCGAG	4020
GACAATCTTA AGCAGGTTCA TCCTATTTTT CAGACTGTCT TTAACACCTT CCTCAAAGAT	4080
AAAGAAAAGG TTATCAACGC CCTTCAACTA CACTATTCTA ATGCCAACT GGAAGCGACC	4140
AATAATCTCA TCAAACCTTAT CAAGCGCAAT GCCTTTGGTT TTCGAACTT TGAAAACCTC	4200
AAAAACGGA TTTTATCGC TCTGAATATC AAAAAGAAA GGACAAAAT TGTCTTTCT	4260
CGAGCTTAGC TTTTTCCTCA CCCACTACAG TTGACAAAGA GCCGGAAAAA GGAACAGCCT	4320
TAGCTTTCCT TTCATTCTT TTTATTTCCC TCGTAGTAAA CGTGCTAGCT TCCACAAAAC	4380
AAACAGGATT CCCAGAAATG CCAGTACCAC TAGCCACGG TACAACCAT T GAGAGGTTGC	4440
AACACGCGAT ACAGATTGTC CTTCTTTCGT AAAAGCAACC CTCGCACTG CAGCTGTTTG	4500
TGGATCTGAT TTTTGATAAA CAGCGACTCG TTCAAAATTC ACTAATAAGC GTTTATTAAA	4560
GGTAGGAATC GGATCGCAGG TTATCAAGGT CATGATATTT TTAGAGCTAA CCGATTCTAA	4620

707

TTTTTCCCAT TCCGACGGTA AAATAATCTC TGTGTCCATC ATCTGATATT CTACAATTTC	4680
CTGGCCATTA TCATAATAAA GAGCATCTCC AACTTTTAGC TGATCCAAAT GGCGGAAAAA	4740
GACATGGCTT GGCTCTGCAC GGTGCCCAGC AATCACTGAG CGAATCCCTG TACCATCCAG	4800
AGGCAGCGGT GTACCATCCA CATGAGCCAA GCCCATCCCT AAATGATGAT AATCTGCTCC	4860
CAAATAAACC GGCTCCATGA TTTCCAACT TGAATAGAC AAGTAACCAT AGACTGCATC	4920
AGGGTCGTCA GACACTTGGT AATTGACCTC ATATCCCTCC GCCAAAAAG GATCTACAAT	4980
GCGATTTTGC GAAGCCAAGC GTTGATTGTA GCGGAGAGAA TGGTTCTGTT GTTCTTGTA	5040
CATTTTCAGTT GTCATGGATT TCACAAATGT AGCATGACCT TTCACCTGTC CAAGAGACTG	5100
CAACACCATC TGTCCAAAAC AATAAATAGG AATCAAACAG GCTACCAACA TCAACAAGTA	5160
TCCAATAAG GCTCGTAGTT TAGTCCTTGA CATGACGCC CTCCAATTGC TTTTCTAGTC	5220
CTTTGACAAT CCGTCGATTA CGATACACGC GATACAGCAA GAGAAGGATG ACCGCCATCG	5280
CTCCTAGTAA TAACCACAAC CAGAATTGCC CACGCTCTCT CACCGCTCGA TTCCGCTCTG	5340
CAATTGGTGC CGTATACGGA ATCCGCTTCC CACGTACCAA CAGACGATGA CTGTTAATCA	5400
TATACGGTGT ACAAGTCAAC AAGGTCGCAT AATCTTCCCC ATGTTGAATC AAGACAGGCT	5460
CAAAGTCATT CGGCTCCACC GTCATATCT GATCCACTTG GTAGGCCAAC ACCTGATCTA	5520
AAACGTGAAG ATAAAAGATA TCCCCTTTT TCATCTTATC CAATTGACTG AACAAATCTG	5580
CCGTTGGCAA TCCTCTGTGA GCAGTGATCA CTGTATGGGT ATTTTCACCT CCAACAGGCA	5640
GCGAAGCCCC TTCTAACAGC CCTGCCCCCT TCTGAAGAAT GTCCTCACTC GTTCCGACAT	5700
ACATCGGAAT TTCTGATCA ATCGCAGGAA TTTCCACATA GCCAATCCGC TCATGGACCT	5760
TTAGCATATT GGCATATTCT GAGACGCCTT TCTTTTCTC TTGCTCTGTA AAAGGATCAA	5820
GAATTCAGA TGGTTTCAAG GTCGCATTGA AGGCTTGAGC CAAGCGCCAA CGCTCCTCAA	5880
GTTCCTGCTT ATCCATCTGG GAAACCGTCT CATCAAATC TTAAATAACC TCGTTTGACT	5940
CAATACGATA ATAATAACGA GACACCAATG GATATATCGC AACGGCGAAT CCTACTAAGA	6000
AAATCAGAAG AAGGATCAGC GGATGTTTCT TCTTTTTTGT GCCTTTTTTTT CGTGAACGTC	6060
TACTGTTGTC CATCCTCCAC CTTCCTTCC TTCCTTGCTG CTTCAGCGC CTTCAAAGCC	6120
TTTTCCGGTT GTTTTTTCTT CTGCGCAAG CGTCGAATAA TCCATAAAAG AATCACAATC	6180
AAACCAACTG CCACATAAAA CAGGTAGCGA TAGAGATGAC TGAGTTTGTT TGCTGCAATA	6240
AATTCTTCCT CAACCTCTGC TACGTACGGT ATCCGATGCC CCCGAACCAA TAGACGATGG	6300
GTATTGATCA TGTATGGCGT ACAAGTCAGC AAGGTCACAT AATCATGACC TGGTACAATC	6360

708

AATAAATCAT CAAAGTTTCGT CGGCTCAATC ACCTTTACTT GATCCACTTG ATAGGCCATC	6420
ACTTCCTTGA TATTGTGCAC ATAAAACTTA TCCCAACTT TAAGTTGGT CAAATCCGTA	6480
AACATCTTAG CTGTTGGCAA ACCTGTATGT GCCGTAATCA CCGCATGGGT CGAATTGCCT	6540
CCGATCGGCA GAGAAGTTCC CTCTAGATGC CCAGCCCCTT GCTGCAATAC CTCTTCAGCA	6600
GTACCAGCAT AAACCGGCAA ATCCACGTCA ATAACGGGGA TTTCCACATG CCCCATCCGC	6660
TCATGGATTT CTAACATACG TGCATACTCT GCTCGCCCTT TTTTCTTCAT TTCTTCCGAC	6720
CAAGGATCGC CACTCACTAC ATTATTCAA GAGTCATTGA AGGCTTGTGC CAATTTTCATT	6780
CGTTCATCAA TGTGAGCCTC ATCCAACGTT GCTTTTTCCT TATCAAAGTC AGCAATTGT	6840
TGATTTGATT CCACTCGATA ATACAAGCGA GACACCAGCG GATACGCCAT TACCGCCATT	6900
CCAATGAAAA ATACCACTCC TAATAGGAGA TTATTTTCGTT TTTGCTTTT TGTTTTACC	6960
ATTTTATCA GCATCCCTTT ATCTTCAAAC TTCAGGGTAT C	7001

(2) INFORMATION FOR SEQ ID NO: 89:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10411 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

GAGGGAGCTT AAGAAGTTAC CACCGTCCTC TAGCGCCTTA TCCGCATCAA AGTTAAGGTT	60
GATATTTTGA AAAGTGTGCG CAGCTTGTGA TACGATGCTT TGTTTAAGGT CATTTAGGGT	120
TTTAGTGAAA TCTGCATTGC TGAGGATATC ACTCTTTGAG AGATTCAAGG CAAAATTGAT	180
GATGATATTG ATCTGGTTTC CTGTTATGAC CTGATCAAGT TTGTAATTTT TTAAGGTATC	240
TTCAACAATC TTGCGGATAT CTTCTTCTGT CAGATTTCCT TTACTTTCTT TAGCTTTGGC	300
GAGTCCTGAC TTGATATCAG CTAGGGCAAC GTTTAATTTA TTAGCATCAT AGCCTGATTT	360
GTCCTTGTTC TCAGCATTGA TATCTGACAA AGCTTTTAGC TCTTCTTGAG CCAAATCTTT	420
ATTAGCTTGT GGCACCTTGG CTCCATTAGC CTCTAGCGAA TAGTAAATCC CTGCTAAAGC	480
ACTTTCTCCT GTAAGTGAA TAGGGGCTGC TACAGTGATT TTGGCATGTT CCATACCCAG	540
CGTTACTGCT GCGTTTCGGT ACATATCCTG AGTCACCTTA GTGATATTTT CTGGTGTTTC	600
AATCTTGACC TCAAGTGGCG ATTTGTCACC TAGCTTTTGA ATCTTGGCTG ATGAATACAA	660
CTGTAAGCTA GAGTCATTGG CCACATTCAT GATTTTAGAA TAAACATCAG GTGTCATGGT	720
CTTGAGTTCT TTGGTATCTG TTGAGGCATT GTAGCCAGT TTTTAAAGAG TTTGATTTT	780

709

TTGGTCTTCA GATAGGGAGG AACCTAGGAC ATATTTCAGGT TGGACATAGG TTTCATCGAT	840
AACCTTTTGA ACATCTGTTG CTGCATGGAC GCTATTTCATA GCTGTTACTG CCCACAAGAT	900
CGCAGCGCTA GTCAGAAAGA GTTCTTTTCT CATAGGGAAT TTCCTCCTTT ACTTCTTTAG	960
AGTAATATAT CTATCTTAAA GAAAACCTAT AACAAAAACA CCTGGTCTAG CCAGATGTTG	1020
AAAAGAGAGT GAAACATTTG ATGATGTAAA GGTTAAGTCG TACCTGTCTA GAATAATAAT	1080
AGTTTCTCC ATTTACATAG AGTTCAGCAC CGTGAAAAAT GGAAATGGGG TGAATATAAC	1140
TATAAGTCTT TCCAGTCCTA TTACCAAGCA AGGGGGCAAC AGTCTCACGA GAGTACTGTT	1200
TGGCTAGAGC CAGGGTATTT TCCTTGCCAT TTTGGGCGAT AAAATCGATA TAGGCAGGTC	1260
CAAAATTATA GGCTTGAACA GCTGTCCAGA TATCTACCCC CTTCTTCTGC GCCAGATAGA	1320
GATTGCCTGT CAGAGTTTGA ATGCCTTGCC GAATGCTAGA GGCATTATCA TTGATGGTGT	1380
TGGTGAAC ACTTGCAGAC TCACTAGACT GCATAACATC GCCTTCTTTT CCTTTTGT	1440
CAGTATAAAT CATAGCAAGC ACAAGCTCTT CGTTTGCTGG GGTGTCTTGT TCACTCAATA	1500
TTTCTCGCAC CATGGGTGA TAGGTCATGA CTGTGTTGAC ATCTTGATGA ACGCGGTAAG	1560
CTTTATAGCC AGCAAAAAGG AAGACTGCTA GTACAAGCAC TCTTCGAATT CGTTTAAACA	1620
TTATTTACTT TGGATATCCT CGATATTTTT GATTAAGATA GAGTAGGTTC CATTTTCGTT	1680
TTGGATAAAC TCAACAGACT CGGCGTCTTG ATAGACGTTA TTGGGAACGA TGAGCTCAAT	1740
TCCATTTGAT AAGGAGAGTT TTTGGTTTTT AAATTTCTTT AATTGGCGAC TGGCATCAAT	1800
TTCATCAAAT TGAACAGGTT CTGGTACGGC TTCTTTGACT TGGTCAATAA AGCTCAAACG	1860
AGCCGTCAGA TTGTTGTCAA AAAGGTCATT AGCCAATTTT TCAGGTGACA ATTCATGTCT	1920
TTCTTCTAGG TTGTTGAAAA TAGCTGATTT GACCTTGGAT TGAAATTGAA AATCATCTGT	1980
GTTAAAAGAT TTAGCAATTC TCTGGGCTGT TTTTCCAGT TCCTTGATAG ATTTTITAGG	2040
AGAAATCTTA GGAGCGACAG CAAGAAGATT ATCTGAAAA TAGTTCAAAA AAGTCCCGTT	2100
GTACTTGATT CGTTTTTCAA TCAGGTGATA CTGCTACTC TGAAGATTGA CCACCAAGGC	2160
CTCATCAGCT CCTGTTCCAA ATCCAGGCAG GTTATTCTGA GTTAGCTTGA TTGGATTATC	2220
AACCTCTCCT CCGAGGTGGG TCAAGGTCTC CCGCAGGGCA ATTCGCAAGA AAGCGAAATG	2280
TTCTACACCT TCTTTAGAAA ATTGCACAAA AATCAAGTCA TTGGTCTTGA GATTTTCAGA	2340
AATGCTAAAC TCCTCTTTCC AGAGATTAGC CAGCGTTACT GATGTCTCCA ACAAATCGTC	2400
TGTAATATGA TTGAAGAAGG GATTTTCTTC TTCGAAAAATC CCAGTCTTGG CTTCATCTGA	2460
ATACACATGT TCAATTTTTT TACGCAGGTA TTCTTCGATT TTTGGAGTAA TATTGAGAAA	2520

710
CTTATCTGCT AAGAACAGTT CGGTATCATC CGGACTGAAC TGGTGAATAA TGGCTTTCTT 2580
AATATAAATG TCCATAAAAG TTTTAGTCCT CGTATAATGG GAAGGCATCT GTCAATTCTT 2640
TGACTGCACT TCTCACTTCT TCTAATACAG CCTCATTTTC TGAATTCTTA AGGGTTTAA 2700
TGATGAGTTC AGCCACTTTG CGACTTTCTT CTTCACCAA TCCACGTGCA GTAATGGCTG 2760
CTGCTCCGAT ACGAATCCCA CTTGTCTTGA ATGGTGACAA GCTTTCGTAA GGGATTGAGT 2820
TTTTATTAA GGTAATATTG ACTTCATCCA ACAAGTTTG AGCAACTTTG CCGTTTCTA 2880
CAACTTTAGT CACATCAACA AGGAAGAGAT GGTTTTCAGT TCCACCTGAA ATAATACGGA 2940
AATCAGGGTC TTGCAAGAAG ACATCTGCCA TAGCCTTGCT GTTCTTAATT ACATTGGCAG 3000
CATATTCCTT GAAGGCTGGA TCCAAACTT CTTTGAAGGA AACTGCCTTA GCCGCCACAA 3060
CATGCTCTAA AGGACCGCCC TGAATACCTG GGAAAATAGC TGAATTGATT TTTTAGCAA 3120
GTTCTTCGTC ATTGGTCAAA ATCAAACCAC CACGAGGTCC ACGAAGGGTT TTGTGGGTCC 3180
TTGTTGTTGT GATATGAGCG TATGGAATG GGCTTGATG AAGGCCAGCC GCAACCAAGC 3240
CAGCGATATG GGCCATGTCC ACCATGAGCT TCGCACCGAC AGCATCTGCG ATTTACGGA 3300
ATTTTGAAAA ATCGATAATT TGAGAATAGG CTGAAGCACC AGCTACAATC AGTTTGGTT 3360
TTACTTCTTG GGCTTGTTC AAGATAGCAT CAAAGTCTAA GAGTTCCGTT TTAGGATCAA 3420
CACTATAAGA AACAAAGTTG TAGGTTTGAC CAGAGAAGCT AACAGGAGCC CCATGAGTCA 3480
AATGACCACC TGATGCCAAA TCCATTCCCA TAACCGTATC ACCTGGCTCA ATCAAGGACA 3540
TGTAAGCCGC ACAGTTAGCT TGGCTTCCTG AATGTGGTTG AACATTGGCA AATTAGCAC 3600
CGAAAATTTC TTTTGCGCGT TCAATAGCAA GAGTCTCTAC AACGTCTACT ACATCAGTTC 3660
CACCATAATA ACGGCGTCTT GGGTAACCCT CGGCATATTT ATTTGTCAAG ATAGACCCTT 3720
GAGCTGCCAT AACAGCCTTG GAACTACGT TTTCCGAAGC AATTAACCTG ATATTATTTT 3780
GTTGGCGTTC TTCTTCTTG GCAATAGCAT TCCAGAGATC AGCATCATAT GCTTTAAAT 3840
CATCTTTGTC AAAAATCATA GGTCTTCTCC TTTATTGTGT GACTAGTCCA TTAGTTTGAT 3900
TTTACAATAA GAAAATCAA CTAACAGATG CGAATAAACC GTTCTGCA TTTATCACAA 3960
GTATAGCCAA CTTTTTCATA AAATGCATGA GCACCCAGAC GATGATTGGC AGAATTTAAG 4020
CGGATAAACC CATAACCACA TCTTTTGCT TCTTCTCCA ACCCTGTAG TAACTTTTA 4080
CCAATACCTT GACCTTGCGC TTGAGGTGAA ACTGCTAAAG CTAAGATATT AAATCCTGCT 4140
TTGGAATAGA GTGATTGCTA AACTTCAGCG TGGACATATC CAAGTAAGAC ATGATTAGCT 4200
GCATCCTCAT AGCCAAGTAG GAAATGATGG GAATCCTGAG ACAGTCTAGC TAGTTGGCTA 4260
GCCGTTTCCT CTGGAATAAA AGTATAACCC AAAGCCTCTT GGTGATGTC ACATATAGCT 4320

711

TTCACATCAG TTTCTCTTAA ATCTCTTAGC ATCTCATTC	TCCTCAAAAG AAATCTTTGG	4380
CAACCGAGCA AGAATATCTT CTCGCTTAAT GGCCCTTGA	CGTAAGATTT TCACCTTGTC	4440
TCCCCACAAA TTCAAATAG TTGAATCCTG TCCAGTTAGA	AAAGCATCGT CTTCCAGACC	4500
CAGAACCTCT TGGTCAAAAT CCTCTAGAAT TTGATTAAAG	GTCACCTCCAC TCGCCTGACC	4560
TGAGATATTG GCAGACGGCC CAATCAAGGG ACCTGTCTCT	CGAATCAAAT CAAGGGTAAT	4620
GGGATGACTA GGCATCCGAA ATCCAACAGT TGCAAGGCCA	GAATTGACCC AATAGGGAAC	4680
TCGGTCATTA GCTTCGAGAA TAATGGTCAA GGGACCTGGT	AAAAAGATCT CTACAAGTTT	4740
TTGAAGATAA GTTGGCTGAT TCTTTGAAAA GTACAAGATG	TCCTCTAAAG AGGCAACATT	4800
GAGATTGAGC GCCTTGCTCT TACGTGACG TTTAAGCTGG	TAAACATGGT CAACTGCTTT	4860
TTCTGTCTAGC GCCTTAGCAA AGAGACCGTA AACTGTCTCT	GTAGGCAAAA CGACAGCTCC	4920
ACCATTTTCC AACTCTTGTC TAATCCTGTC CATCATCAAC	GACAACCATC CTATCTTGAC	4980
CAAATGGTC CTGAGTGTT CGTACTCGCT TTTCAGGAAG	ATGTTTCCTA AAAAGTTCAG	5040
GAACACTTTG ACCTTGCTTG TATCCAATT CAAGGTAAAT	CTTACCACCA TCTTTGAGAT	5100
AGTCTTTTGC ATCTTCCGCA ATTCTACGGT AAATAGCTAG	GCCATCCTCA TCTGCAAAGA	5160
GAGCTAGATG AGGCTCCGAA TACAAGACAT TCAAGCCTAC	CTCTGACTCA TCTTCACGAG	5220
AGATATAGGG TGGATTGGAA ACAATTATAT CATATTTTTC	AGAAATTTCT GTAAACAGT	5280
CAGATTTTTT TAAAAATATT TGAAGATTTT GATTTTtagc	ATTTTCGCTA GCTACATCTA	5340
AAGCATCTTG GGAAATATCT GCTGCCGTCA CTGACCAATC	TGGTCTGTTT TTTGCTAGAG	5400
CGAGAGCAAT AGCTCCACTA CCTGTTCCGA TATCTAGGAC	CATAAGATTT TTCACAGGAT	5460
TTTCAGCCAG GATAAGCTCC ACCAACTCCT CTGTTTCTGG	ACGAGGAATC AAAACCCGTT	5520
CATCCACCTT TAAATGCATT CCATAAAAAT TGCCTGTCC	AATGATGTAC TGAGCTGGCT	5580
TGTGAGCTGC TAGTTGCTGG TAAATATCTT CTACAAATTG	TTTTTCTTCC TCTGTGTCA	5640
CCTCCTGCTG GAGGGCAAAA ATAAAGTCTG TAAAAGATAG	ATTTTTCAGA CTACGATAGA	5700
CAAAGAGAG GCTTTCGGCT TCCTCTCCTT GTCTTATCAA	CTCTTCTTCA AAATTGAAA	5760
ATAATTGAGC TAATTTCATT ATTTGTTTAA TTCTTCTAGT	TTTTGTGTTT GGTCAATAAG	5820
CACCAAGGCA TCCACAACCT CGTCCAATTT ACCAGACAAA	ATCGTATCTA GTTTTGGAG	5880
GGTCAAGCCG ATACGGTGGT CTGTGACACG GTTTTGTGGG	AAGTTATAAG TTCGGATCCG	5940
TTCTGAACGG TCACCAGTAC CGATTGTCGA CTTACGCTCA	GCGTCCTGCT CATCTTGAGC	6000
AATCTGAGCA AAGTGGTCAG CAACACGGGC ACGGATGATT	TTTCATGGCCT TCTCACGGTT	6060

712

CTTCTGCTGG GTACGTTCTT CCTGCATCTC AACCTTGATA TTGGTTGGCA AGTGAACGAT	6120
ACGAACGGCA GTCGCAACCT TATTGACGTT CTGTCCACCA GCACCAGAGG CGTGATAGAT	6180
GTCGACACGA AGGTCTTTTG GATCAATGTC GTATTCAACC TCTTCAACTT CTGGCATAAC	6240
AAGAACTGTC GCTGTCGAAG TATGAACACG GCCTTGGCTT TCTGTCACAG GAACACGTTG	6300
CACACGGTGG GCACCTGATT CATACTTAAG CTTAGAGTAT ACAGACTGAC CTGAAACCAT	6360
AGCAACCACT TCTTTAAAC CACCGACACC ATTCATAGAG GCTTCCATGA CTTCAAAGCG	6420
CCAACCTTGG GCTTCCGCAT ACTTTGGTA CATAGTTAGC AAATCTCCAG CGAAAAGTGC	6480
CGCTTCGTCT CCACCAGCTG CTCCACGGAT TTCAAGGATG ATATTCTTGT CATCGTTTGG	6540
ATCCTTTGGA AGGAGCAAAA TTTTCAGTTT TTCTTCATAT TCTTCTTTT CAGCCTTGGC	6600
ATCTTTGAGT TCTTGCTTGG CCAATCTTC CAAGTCCGCA TCTCCGCTG ATTCCTTAAT	6660
CATCTCTTCG GCATCGACGA TATTTTGAAG GACTTGTTTA TACTCACGGT AGGCTATTAC	6720
GGTGTACGA TTGGAAGCTT CTCTTTTGA AAGCTCCATA AAACGCTTGG TGTCTGAAAC	6780
GACATCAGGG TCACTCAGCA ATTCTCCTAA TTCTTCATAA CGGTCTTCTA CAACTTGTAG	6840
TTGATCATAG ATGTTCAATT TTTCTCCTTA TTTCTCAATT GTTAAATCAT AGATTGCTAC	6900
TACTTCATTC TCGGATATTT CCCCAGTTTC TTTAAATCCA TAACTGAGGT AACAAAATCT	6960
TGCCTGTTCA TTTTCTGGTT CATAAGACAA CCAAAGTTTA TTGCTTAAAC CTGCTGGCGC	7020
TGTTGGAACA TAGTCTAGTA CTTTATCCAT AATTGGTTTA AAATATCCTT GATTTTGAAA	7080
ATTCTTATCA ATCATAAAAC GAAATAGTAA ATAATTTCCA CTACTAATTC CGATCTTTTT	7140
ATCATAAGCT ATCATCACAA AACCTATAAT TGCATCATT TCATAAACTG CCAATGGAGC	7200
TACAAAATCT CCATTTTTAG TGTAGACGTA TGCTTCAGCT AAATAATTG CGTTGGTTGC	7260
AATGAATTGT TTTTGATATT CCTTGACATC CAAATTTAAA ACATCAAAAT AATTTTCCAT	7320
TGTAACATCT CTTAGTTCAA TTGTCATAGT TTTGCTCCTT GTTAGAGGTT ATCATTGGCG	7380
CAAAATAATG TTTACGGCAA ACTGAGATAT AGGTTCGTT ACCACCAATC TGGATCTGTT	7440
CTCCATCGTA AACGGGCACT CCATCCTGTG TTCGCAACAC CATGGTCGCC TTTTCTTGC	7500
AATACTGACA GATGGTCTTG ATTTCTGCAA TCTTGCTGTC TAAAAGCAAG AGATATTGG	7560
AACCTTCGAA CAATTCATTG CGAAAGTCAT TTTTCAAGCC AAAAGCCATG ACGGGTATGT	7620
CTAACTCGTC CACAACACGA GCTAGGTCGT AAACATGGTG GCGTTTGAGA AACTGGGCTT	7680
CATCGACCAA AACACAGTAA GGTTTTCTG GTAGGTCTCG GATATAGCCA AAGATATCCG	7740
TTGTTCTCTC AATCGCAAGG GCAGGGCGTT TCATGCCAAT TCGACTCGAC ACATAGCCAA	7800
CGCCGTCACG CGTATCCAGA GCCGAGGTCA TAATCACAAC ACCTTTTCCT TGCTCCTCGT	7860

713

AGTTATAGGC CACTTTGAGA ATCTCAATCG TTTTACCAGA GTTCATGGTC CCATAACGAT	7920
AGTACAAC TGCCATGTTT CTTGCTTCAC GTCCATTTCT AAATTTTGC TACATTTCTAG	7980
TATATCATAA TTTTCTTAAG CTTTAAACGG CAAAATGTGG TAAAATAGAA GAAATCAAAA	8040
ACTAGTGGAG GAAGCTATTA TGCCATTTGT ACGCATCGAT TTATTTGAAG GACGCACGCT	8100
CGAGCAAAAG AAAGCTCTTG CTAAGGAAGT AACGGAAGCA GTTGTCCGCA AACTGGAGC	8160
CCCTCAATCT GCTGTCCATG TCATCATCAA CGACATGCCA GAAGGAACCT ACTTCCCACA	8220
AGGGGAAATG CGTACTAAAT AAGCTAGCTT AAGCAGAATT GCTTAGGCTT TTTCAATCTC	8280
CAAGTAGCAT TCATTGAAGA AATATCCTAA ATTTGTTACA ATTTGAAAAG AACTTGGAG	8340
AATTTCCAAG AAAAGAGCTA TTAATTAAAG GAAACATTAT GATTACACGT GAATTTGATA	8400
CCATCGCTGC TATCTCTACT CCACTAGGTG AAGGGGCTAT TGGTATTGTC CGCCTGAGCG	8460
GAACAGACAG TTTTGCTATT GCGCAAAAGA TTTTTAAAG AAAAGACTTG AACAAGGTTG	8520
CCAGCCACAC TCTCAACTAC GGTCACTTA TTGATCCTCT GACTGGTAAA GTCATGGACG	8580
AGGTTATGGT TGGGGCTATG AAGTCTCAA AGACCTTCAC TCGTGAGGAT ATTATCGAGA	8640
TTAACACCCA CGGTGGGATT GCGGTGACCA ATGAAATTCT CCAGCTAGCT ATTCGTGAAG	8700
GGGCTCGGTT GGCAGAACCT GGTGAATTTA CCAAACGTGC TTTTTTAAAC GGTGCGGTAG	8760
ACTTGACACA GGCAGAGGCT GTGATGGATA TCATCCGTGC CAAGACTGAC AAGGCCATGA	8820
ACATTGCGGT CAAACAATTA GACGGCTCCC TTTCTGACCT CATTACAAT ACCCGTCAAG	8880
AAATCCTCAA TCACTTGCC CAAGTTGAGG TCAATATCGA CTATCCTGAG TATGACGATG	8940
TTGAGGAAGC CACTACTGCT GTTGTCGAG AGAAGACAAT GGAGTTTGAG CAATTACTAA	9000
CCAACTCCT TAGGACAGCA CGTCGTGGTA AAATCCTTCG TGAAGGAATT TCAACGGCTA	9060
TCATTGGACG TCCCAACGTT GGGAAATCAA GCCTTCTCAA CAACCTCTTG CGTGAGGACA	9120
AGGCTATCGT AACAGATATC GCTGGGACAA CACGAGATGT CATCGAAGAG TACGTCAACA	9180
TCAATGGTGT ACCTCTCAA TTGATTGATA CAGCCGGTAT TCGTGAAACG GATGATATCG	9240
TTGAACAAAT TGGAGTTGAG CGTTCGAAA AAGCTCTTAA GGAAGCTGAC CTAGTTCTGC	9300
TAGTACTAAA CGCTAGTGAA CCACTAACCG CCCAAGATCG CCAACTCCTA GAAATCAGTC	9360
AGGAGACTAA TCGCATTATT CTTCTTAACA AAATGACCT GCCTGAAACG ATTGAAACTT	9420
CGGAACTACC TGAAGATGTC ATCCGCATTT CAGTTCTTAA AAATCAAAAC ATCGATAAAA	9480
TCGAAGAGAG AATCAACAAC CTCTTCTTTG AAAATGCTGG TTTGGTTGAG CAAGATGCTA	9540
CCTACTTGTC AAACGCCCGT CACATTTCTT TGATTGAGAA GGCCGTTGAA AGCCTACAAG	9600

714

CTGTTAACCA AGGTCTTGAA CTAGGGATGC CAGTTGACTT GCTTCAAGTT GACTTGACCC	9660
GTACTTGGGA AATTCTAGGA GAAATCACTG GAGATGCTGC TCCAGATGAA CTCATCACCC	9720
AACTCTTTAG CCAATTCTGT TTAGGAAAAT AAGAAAAATC CATGATCCTT CATTCCGTCA	9780
TGGATTTTAG GTTCTATAAT ATTTGTAGTG GGTAAATCCA CTATAGATAT TATGGAGCCT	9840
ATTTTATGTG AGAAAAAAG TCCCATATGA CCTATAATGA AAAGCGACAA AACAACTCAT	9900
TAGAAAGAAT CATATGGAAC AATTACATTT TATCACAAA TTAGTAGACA TTAAAGACCC	9960
TAATATCCAG ATTTTAGACA TCATCAATAA GGATACACAC AAGGAAATCA TCGCCAAACT	10020
GGACTACGAC GCCCATCTT GCCCTGAGTG CGGAAACCAA TTGAAGAAAT ATGACTTTCA	10080
AAAAACCTTC TAAAATTCCT TATCTTGAAA CGACTGGTAT GCCCACTAGA ATTCTCCTTA	10140
GAAAGCGTCG ATTCAAGTGC TATCACTGTT CAAAATGAT GGTCGCTGAA ACTTCTATCG	10200
TCAAGAAGAA TCACCAAATC CCTCGTATCA TCAACCAAAA GATTGCTCAA AAGTTAATTG	10260
AAAAGATTTC TATGACTGAT ATTGCCCATC AGCTTTCCAT CTCAACTTCA ACTGTTATTC	10320
GTAAGCTCAA TGACTTTCAC TTAAACATG ATTTTCTCTG TCTTCCTGAG ATTATGCTTT	10380
GGGATGAGTA TGCTTTTACA AAAGGGAAGA T	10411

(2) INFORMATION FOR SEQ ID NO: 90:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2393 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

GTTTTGGGTT CTGGAAATTA TCAGATGGTT GGAAAAGCCG TCCACATCAA GATAGTGTTC	60
GGAGATTTAA GTTTAAATTG AAGAACTAA CACAGAGGAA ATGGAGTATA GACCTAACAA	120
GACGTATTGA GCAACTGAAT TTGTCTATTG GAGGATGGAT AAACCTATTGC TCATTGGGAA	180
ATATGAAAAG TATAGTCGCC AGCATAGATG AGCGCTTGCG TACTCGCCTA CGAGTGATTA	240
TCTGGAAGCA ATGGAAGAAG AAATCGAGAC GATTATGGGG ATTGCTTAAG TTAGGAGTTC	300
CTAAATGGAT AGCAGATAAG GTATCTGGCT GGGGCGACCA TTATCAATTA GTAGCTCAGA	360
AGTCGGTACT TAAACGTGCT ATATCAAAAC CAGTCCTGGA AAAACGTGGA CTGGTTTCGT	420
GTTTGGATTA TTACCTTGAA CGACATGCGT TAAAAGTTAG TTGAACCGCC GTATGCCAAA	480
CGGCACGTAC GGTGGTGTGA GAGGGGCTAG AGATTATCCC CTAATCGATT AACTCCCCTG	540
AAATTTATTT TAATTATGCA AATTTACGT ATTTTGTATG CTGAGACGAC GATCCTGGGA	600

715

ACTTTTCAGA TATTTTTTTG ACTATCTAAA TCTATCATTA GAAAAGCTTA GAGCGCCAAA	560
GGATTGAGC GTTTTTCTGA TTTTAAAGAC TTTTCCAGT CTCTTTTTCG ATTGAAGATG	720
TAATTATTCT ACTAACTAAC TAACTTCTTA GTACTAGCCA ACAACGATAA TCATAATTCC	780
TCCTAAAAAT AGGAATAATA AAGGCAATAG TTTTGTGTTT TTCATGTAAA AAACCTCACT	840
TTTGTGTTCT GCTATTTTAT GCTAAAATAT TAAAAATCAA ATTTAATTCC AAAGTTTGTA	900
ACTAAAGGGG GAGCGCTACA TGTCTAATTC ATTTGTCAAG TTGTTAGTCT CTCAATTATT	960
TGCAAATTTA GCAGATATTT TCTTTAGAGT AACAATCATT GCTAACATAT ACATTATTTT	1020
AAAATCAGTA ATTGCCACAT CACTAGTTCC TATCTTAATA GGAATATCCT CTTTGTGTGC	1080
GAGTCTTTTA GTTCCGTTGG TTAATAAAG GTTAGCGCTA AATAGGGTTT TATCTTTATC	1140
TCAATTTGGA AAGACTATAT TATTGGCGAT ACTGGTAGGA ATGTTTACCG TAATGCAATC	1200
CGTAGCGCCT TTGGTGACCT ATCTATTTGT TGTGCAATT TCCATACTAG ATGGTTTGTG	1260
AGCACCCGTT TCCTATGCTA TTGTGCCACG CTATGCGACC GATTTGGGTA AGGCTAATTC	1320
AGCCTTATCA ATGACTGGTG AAGCTGTCA ATTGATAGGT TGGGGATTAG GTGGACTCTT	1380
GTTTGCAACA ATTGGTCTGT TACCTACCAC GTGTATCAAT TTAGTCTTGT ATATCATTTT	1440
TAGCTTTCTG ATGTTATTTT TTCCTAACGC TGAAGTGGAG GTGTTAGAGT CAGAACTAA	1500
TCTTGAAATT TTGCTCAAAG GTTGGAAGTT AGTTGCTAGA AATCCTAGAT TAAGACTTTT	1560
TGTATCAGCA AATTTATTGG AAATTTTTC AAATACGATT TGGGTTTCTT CCATTATACT	1620
TGTTTTTGTA ACGGAGTTAT TAAATAAAAC GGAAAGTTAC TGGGGATATT CTAATACAGC	1680
ATACTCTATT GGTATTATAA TTAGTGGCTT AATTGCTTTT AGGCTATCTG AAAAGTTCCT	1740
TGCTGCTAAA TGGGAACCCC AATTATTAC CCCAAATCTA AAAACCATCC AGAATCCTTG	1800
CCTTAGCTTA GATCCTGGAT GGTTCCTTTT TTCACCCAAT GGGTGTTTTT TACTAGACAA	1860
AAAAGAGTTT CCCCTTTATG GTATAAGTGT AGAAAAAAC ACAAAAAGAA AGGAAACTCA	1920
CATGAACAGT TTACCAAATC ATCACTTCCA AAACAAGTCT TTTTACCAAC TATCTTTTCA	1980
TGGAGGTCAT TTAACCCAGT ATGGTGGTCT TATCTTTTTC CAGGAACCTT TTTCCAGTT	2040
GAAACTAAAA GAGCGGATTT CTAAGTATTT AGTAACGAAT GACCAACGCC GCTACTGTCTG	2100
TTATTCGGAT TCAGATATCC TTGTCCAGTT CCTCTTTCAA CTGTTAACAG GTTATGGAAC	2160
GGAATATGCT TGTAAGAAT TGTGAGCTGA TGCCTACTTT CCAAAATTGT TGGGAAGGAG	2220
GCAGCTTGCT TCACAGCCAA CCTTATCCCG TTTTCTTTCC AGAACTGACG AGGAAACAGT	2280
CCATAGTTTG CGATGCCTCA ACCTTGAATT GGTGCAATTC TTTTACAGT TTCACCAGCT	2340

716

AAACCAACTC ATTCTAGATA ACGATTCTAC CCATTTTACA ACTTATGGCA AGC 2393

(2) INFORMATION FOR SEQ ID NO: 91:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4762 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

TTGTATCTT TTTAGGTCTC TTTCAATCCA AACCCTTTAA ACTATACGTC ATTTTCGGTTC	60
CTGCAAGTCT TGTGGTAATT TTAGGTTTGA TTTTACTTTT CTTTTCACAA GAGCCTCTGC	120
ACGCTTCTTA TTTGATGGTC GTCTTCCCTG TTTTCTACT TTTATTGGTA ACCAATATTA	180
AGAGTCAACA GAGGGGGCGT AGTGCTAGAA GAAGCCGAAG AGAAACGCCA TTATGCCTAT	240
GGAGTCGTTT CTTCAAAGGA AATCTATATC TGCTAGTTT TGGGTTTGTC TATCTTTTGT	300
CTGTTCCTTT TTTGATGAAG TTTGTCCTTT ATCCAGTACC TTATCAAGAA CGTAATCGTC	360
TTGCTGATTT GGTAAAAGAG GAGACAAATA CGGAAGATGC TATCTCATGC ATGGGATGAT	420
ACTGCGACTC TTTATCGTAA GAGTGAGCGC TTGTCCCATC GGCGATTTTG TCCCCGTGTC	480
ACTATACAGC AACTGAGGAA AATCGTAATA AGTTACTTAA TGACTTGAAA GAAAAACAAC	540
CTAAGGTGAT TGTGGTAAAT GATAAGGTGG TAGTCTGGTC TGAAGTGGA ACACCTCTTA	600
AAGAAAATTA CCAACAAGTA AAGACTGATT ACTCAGAGTT TAAAGTCTAT AAAATTAAT	660
AACCAATCA ATATCTTGTG TATTTTAAA AATTTTAGGA TTTTAAACAC AAGATATTGA	720
TTTTTCCTTT TAGAGTGGTA TAATACTTTT TAGAAAGAAC ATTTTAGAAA AGAGCATGCA	780
TATGATTGCA CTAGAAGAAA AAATTACAAT TTTGCCAACT CTCTTCGTCG AGAAACGAGA	840
TGGGAGACGT GTTGTATTG ATGTGGACAA GATTGACAAG GCTCTCCACA AGGCGGCTGA	900
CAAGGTTATG GATGTGACAC CCCTGGTTGA AAAATGCCTC AATGATCTGA CTGAGCGAAT	960
TATTACAGAA ATTCATAGTC GCTTCCACA GGAATTAAG ATTTACGAAA TTCAAAATAT	1020
CGTAGAACAT GAACTCCTTG AAGCCAAAGA ATATGCGCTG GCTGAGGAGT ATATTACTTA	1080
TCGGACACAG AGGGATTTTG AGCGCTCAAA AGCGACGGAT ATCAACTTTA GTATTCATAA	1140
ACTTCTCAAC AAAGACCAGA CAGTTGTCAA TGAAAACGCT AATAAAGACA GTGATGTCTT	1200
TAACACTCAG CGTGATTGA CAGCAGGGAT TGTTGGGAAA TCAATCGGAC TGCAAATGCT	1260
TCCTAAGCAC GTAGCCAATG CCCACCAAAA GGGGATATC CACTATCACG ATTTGGACTA	1320
CAGTCCCTAT ACCCCTATGA CCAACTGCTG TTTGATTGAT TTTAAGGGTA TGTGGAAAA	1380

717

TGGTTTAAAG ATTGGAAATG CAGAGGTAGA GAGTCCCAAG TCTATCCAGA CTGCGACAGC	1440
ACAGATTTCT CAAATCATTG CCAACGTTGC TTCTAGCCAG TACGGTGGCT GTTCAGCTGA	1500
CCGTATCGAT GAAATTTTGG CGCCTTATGC AGAGAAGAAT TATCAAAAAC ATCTCAAAGA	1560
TGCAGAAGAG TGGGTATTGC CTGAAAAACA GGAAGATTAC GCTTGAAGA AAGCGCAAAA	1620
GGACATCTAC GATGCCATGC AATCTCTTGA GTATGAAATC AATACTCTCT TCACTTCAAA	1680
TGGACAAACA CCTTTTACTT CGTTAGGTTT TGGTCTGGGA ACCAGTCGTT TTGAACGAGA	1740
AATCAAAAA GCTATTTTAA ACATTTCGCAT CAAGGCTCTT GGTTCAGAAC ACCGTACGGC	1800
TATCTTTTCT AAACCTATCT TTACGCTTAA AAGAGGCCTC AACTTAGAGG AAGGAACTCC	1860
CAACTATGAC ATCAAGCAGT TGGCTCTAGA GTGTGCAACC AAGCGGATGT ATCCAGACGT	1920
CTTGTCTTAT GATAAGATTG TTGATTTGAC AGGTTCTTTC AAGGTGCCTA TGGGCTGCCG	1980
TTCTTTCTCT CAAGGGTGGA AGGATGAAAA TGGTGTAGAA GTCAATTCAG GTCGCATGAA	2040
TCTGGGTGTT GTGACGGTTA ATCTGCCTCG TATTGCTCTT GAGTCTGAAG GTGATATGAA	2100
TAAGTCTCG GAAATCTTCA ACGAGCGAAT GAATATCGCA GAAGATGCTC TTGTTTACCG	2160
TGTCGAACGC ACTAAGAGG CGACACCAGC GAATGCTCCT ATTCTTTATC AGTACGGTGC	2220
TTTTGGCCAT CGTCTAGGTA AAGAAGAAAG TGTTGACCAG CTCTTTAAGA ATCGTCGTGC	2280
GACCGTTTCG CTGGGCTATA TCGGCTTGTA TGAAGTAGCG ACAGTTTCTT TTGGTAACAG	2340
CTGGGAAAGT AATCCAGATG CTAAGGAATT CACGCTAGAC ATCATTCACG ATATGAAACG	2400
CCGTGTAGAA GAGTGGTCAG ACCAATATGG CTACCATTTT TCTATCTACT CAACACCATC	2460
CGAAAGTCTG ACAGACCGTT TCTGCCGACT AGATATAGAC AAGTTTGGCT CTATTCCTGA	2520
TATCACAGAC AAGGAATACT ACACCAACTC TTTCCACTAC GATGTTGCTA AAAATCCAAC	2580
ACCGTTTGAA AAATTGGACT TTGAGAAAGT CTATCCGGAA GCAGGTGCGT CAGGTGGTTT	2640
CATCCATTAT TGTGAGTATC CAGTCCTTCA GCAAAATCCA AAGGCCTTGG AAGCTGTCTG	2700
GGATTATGCT TATGACCGTG TAGGCTATCT AGGCACCAAT ACTCCGATTG ACCGTTGCTA	2760
CAAGTGTGAC TTTGAAGGGG ATTTTGAACC AACTGAGAGA GGGTTTGCTT GTCCAAACTG	2820
TGGCAATAGC GACCCATAAA CAGTAGATGT GGTGAAACGA ACTTGTGGCT ACCTAGGTAA	2880
TCCTCAAGCA AGACCGATGG TCAACGGGCG TCACAAGGAA ATCGCTGCGC GTGTCAAACA	2940
TATGAATGGT TCAACGATTA AAATAGCTGG GCATCAAGTA ACAAATTAGA AAGAAATGAA	3000
ATGGGAAAA ATCAACTAGA CGATAAGGGG CGCGCACAAG TGACCCGTTA TCACGAGAAA	3060
CACTCTAAAG GTGGAGCTGG TAAGAAAGAA CGCTTGCTTA GCTTCAGAGA ACAATTTTTA	3120

718

AACAAGAACA AGAAAAAATA AAAGTGAGAG CCAGCTCTCG CTTTCTCAT AGTGGGAGGT	3180
AAGGATGGAA TTACGCAGAC CAAGATTAGC GGATAAGAAA GCTGTTTTAG ATATGATGAC	3240
AGAGTTTGAA AAATTCAGT CGCCTCACGA CGGCGGTTTC TGGGATACAG AGAACTTTGT	3300
GTATGAAGAC TGGTTAGAAA GCAATCAGGA ACAGGAAATG GGGATTAATC TGCCTGAAGG	3360
ATGGGTTTCT GCAATTCAGT TAGTGGCTTT TTCTGAGAAA GGTCAAGCAG TTGGATTTCT	3420
TAATCTCCGG TTGCGCCTCA GTAACTTTCT ACTAGAAGAA GGTGGCCACA TTGGCTACTC	3480
CATTCGTCCA TCTGAAAGAG GCAAGGGTTA TGCAAAAGAG ACTCTCCGTC AGGGCTTGCA	3540
AGTTGCTAAG GAAAAGAACA TCAAGAAAGC TCTGGTGACC TGTAAGTGTGA ATAATCCTGC	3600
TAGCAGAGCA GTCATTCTAG CAAATGGTGG AATATTTGAG GATGCTCGCA ATGGAGTCGA	3660
GCGTTATTGG ATAGAGGTAG CGAATGAATA ATCCAAAACC ACAAGAATGG AAAAGCGAGG	3720
AACTTAGTCA AGGTCGTATC ATTGACTACA AGGCCTTTAA CTTTGTGGAC GGCGAAGGCG	3780
TGCGCAACTC TCTCTATGTA TCAGGCTGTA TGTTTCACTG CGAGGGATGT TATAATGTTG	3840
CGACTTGGTC TTTTAATGCT GGCATTCCCT ATACAGCAGA ATTAGAAGAG CAGATTATGG	3900
CAGACCTTGC CCAACCCTAT GTTCAAGGCT TGACTTTGCT GGGAGGGGAG CCTTTTCTCA	3960
ATACTGGGAT TCTCTTGCCA CTTGTTAAGC GGATTCGGAA GGAATTGCCA GACAAGGACA	4020
TCTGGTCCTG GACCGGCTAC ACTTGGGAAG AAATGATGTT GGAAACTCCA GATAAACTGG	4080
AATCTTTGTC ACTGATTGAC ATTCTTGTG ATGGAAGATA TGATCGAACT AAGAGAAATC	4140
TTATGCTCCA GTTTCGAGGT TCATCTAACC AACGAATTAT CGATGTGCAA AAATCGCTCA	4200
AAAGTGGGCA AGTAGTGATT TGGGACAAGC TCAATGACGG AAAAGAAAGC TATGAACAGG	4260
TGAAGAGAGA ATGAAGAAAA AGGACTTAGT AGACCAACTA GTCTCAGAGA TCGAGACGGG	4320
GAAAGTCAGG ACACTGGGAA TATACGGTCA TGGAGCTTCA GGTAAATCAA CCTTTGCACA	4380
GGAATTGTAC CAAGCTTTAG ATTCTACTAC AGTAAATTTG CTAGAGACAG ATCCTTATAT	4440
CACCTCAGGA CGCCATCTGG TAGTACCCAA GGACGCGCCG AATCAAAAGG TGACAGCCAG	4500
TCTGCCAGTG GCGCATGAAC TGGAGAGTTT GCAGAGAGAT ATCCTTGCTT GCAGGCGGGT	4560
ATGGATGTCT TGACAATTGA AGAACCTTGG AAGGCTAGTG AGGTCTTGTC TGGAGCCAAA	4620
CCAATTTTGA TTGTCGAAGG GATGTCTGTT GGCTTTCTAC CCAAGGAACT CTTTGAAAAA	4680
ACCATCTGTT TCTACACGGA TGAGGAGACC GAATTAAAGC GACGCCTTGC TAGAGATACC	4740
ACTGTGAGAA ATCGCGATGC GG	4762

(2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:

719
(A) LENGTH: 3832 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

GATGCAGGTT TCGACCCACA TATTCCAGAA AATTACTTTA AAGATGATGA TGTTAATCAG	60
GTACCTTGTC TTGTTGGTC TTCATCTGCA GCCCTCTTTT TCAGTAATTG GGTAGACCAT	120
GCGGTCTATC AGGAGACGCC TTTTGATTGG AGAAAGATAG AAGATGATGC ATCTGCATAT	180
GGGTATTTAT AAGAGGAATT ATGACATATT TAGACGCTTT TAAATCAGGT ACCTTGCTTT	240
TACCGAGTGC CCTGCTCTTG CATTTTAAGG AACTCTTTCC TTCTAGCGAC GATTTTCTGG	300
TTTGGCAATT TTTCTATTTG CAAAATACGA CAGGCTTAGA AGAAATGTCG CCAAGCCAGA	360
TTGCTGAAAG GATGGCAAG GAAATTTCGG ATGTCAACCA GTCCATTTCT AATCTGACGG	420
AAAGGGGACT GCTCCAGTAT CGTACTATCG AATTAAATGG CGAAATTGAA TTGCTCTTTG	480
ATGCTAGTTT GGCCTTGGA CGTTTGGATG ACCTGTTTGG AGCAGTTCAT TCAAGTTCAG	540
ACCAGCTAAC ACCTCAAAAC CAGCTCAAGG ATTTGGTGGA AACCTTCCAG CAGGAGTTGG	600
GACGATTGTT GACGCCTTTT GAGATTGAGG ATTTGACCAA GACACTAAAG GAAGATGGAA	660
CCAGTGCTGA CTTGATTAAG GAGGCTCTTC GTGAAGCTGT TTGAATGGA AAACCAAAC	720
GGAAGTACAT TCAGGCGATT TTGAGAACT GCGCCATGA AGGAATCAAG AGTGTGGCTC	780
AAATTGAGGC CAAGAGAGCA GAAAGAGAAG CAAGCAATCC TCAGTTGACA CAGGTATCTG	840
CAGATTTTAT AAATGCCATG GATCTCTGGA AGGATTAATC CATGCAAGTA GGCTTGAAAT	900
CCGAGTAAGA TTTGCAAGCT GTGTATAATT GTGATAGAAT AAATAGAAAA TAAATTGAAA	960
AAAGAGGTAT GTGAAATGTC ACGTAAACCA TTTATCGCTG GTAAGTGGA AATGAACAAA	1020
AATCCAGAAG AAGCTAAAGC ATTCGTTGAA GCAGTTGCAT CAAAACCTCC TTCATCAGAT	1080
CTTGTTGAAG CAGGTATCGC TGCTCCAGCT CTTGATTGTA CAACTGTTCT TGCTGTTGCA	1140
AAAGGCTCAA ACCTTAAAGT TGCTGCTCAA AACTGCTACT TTGAAAATGC AGGTGCTTTC	1200
ACTGGTGAAA CTAGCCCACA AGTTTGTGAAA GAAATCGGTA CTGACTACGT TGTATCGGT	1260
CACTCAGAAC GCCGTGACTA CTTCATGAA ACTGATGAAG ATATCAACAA AAAAGCAAAA	1320
GCAATCTTTG CGAACGGTAT GCTTCCAATC ATCTGTTGTG GTGAATCACT TGAACTTAC	1380
GAAGCTGGTA AAGCTGCTGA ATTCGTAGGT GCTCAAGTAT CTGCTGCATT GGCTGGATTG	1440
ACTGCTGAAC AAGTTGCTGC CTCAGTTATC GCTTATGAGC CAATCTGGGC TATCGGTACT	1500

720

GGTAAATCAG CTTCAACAAGA CGATGCACAA AAAATGTGTA AAGTTGTTTCG TGACGTTGTA	1560
GCTGCTGACT TTGGTCAAGA AGTCGCAGAC AAAGTTCGTG TTCAATACGG TGGTTCGTGT	1620
AAACCTGAAA ATGTTGCTTC ATACATGGCT TGCCCAGACG TTGACGGTGC CCTTGTAGGT	1680
GGTGCGTCAC TTGAAGCTGA AAGCTTCTTG GCTTTGCTTG ACTTTGTAAA ATAATCAGTA	1740
AGTAGCAAAA GCTAGGTGGA ACAGCATTCA GATGCTGTGT ACATTTTTTA TAGGAGAGAA	1800
AGATTGAAAA CAAAAATTGG ATTAGCAAGT ATCTGTTTAC TAGGCTTGGC AACTAGTCAT	1860
GTCGCTGCAA ATGAAACTGA AGTAGCAAAA ACTTCGCAGG ATACAACGAC AGCTTCAAGT	1920
AGTTCAGAGC AAAATCAGTC TTCTAATAAA ACGCAAACGA GCGCAGAAGT ACAGACTAAT	1980
GCTGCTGCCC ACTGGGATGG GGATTATTAT GTAAAGGATG ATGGTTCCTAA AGCTCAAAGT	2040
GAATGGATTT TTGACAACTA CTATAAGGCT TGGTTTTATA TTAATTCAGA TGGTCGTTAC	2100
TCGCAGAATG AATGGCATGG AAATTACTAC CTGAAATCAG GTGGATATAT GGCCCAAAAC	2160
GAGTGGATCT ATGACAGTAA TTACAAGAGT TGGTTTTATC TCAAGTCAGA TGGGGCTTAT	2220
GCTCATCAAG AATGGCAATT GATTGGAAT AAGTGGTACT ACTTCAAGAA GTGGGGTTAC	2280
ATGGCTAAAA GCCAATGGCA AGGAAGTTAT TTCTTGAATG GTCAAGGAGC TATGATGCAA	2340
AATGAATGGC TCTATGATCC AGCCTATTCT GCTTATTTTT ATCTAAAAATC CGATGGAAT	2400
TATGCTAACC AAGAGTGCCA AAAAGTGGGC GGCAAATGGT ACTATTTCAA GAAGTGGGGC	2460
TATATGGCTC GGAATGAGTG GCAAGGCAAC TACTATTTGA CTGGAAGTGG TGCCATGGCG	2520
ACTGACGAAG TGATTATGGA TGGTACTCGC TATATCTTTG CGGCCTCTGG TGAGCTCAAA	2580
GAAAAAAAAG ATTTGAATGT CGGCTGGGTT CACAGAGATG GTAAGCGCTA TTTCTTTAAT	2640
AATAGAGAAG AACAAGTGGG AACC GAACAT GCTAAGAAA TCATTGATAT TAGTGAGCAC	2700
AATGGTCGTA TCAATGATTG GAAAAAGGTT ATTGATGAGA ACGAAGTGGG TGGTGTCTAT	2760
GTTCTGCTAG GTTATAGCGG TAAAGAAGAC AAGGAATTGG CGCATAACAT TAAGGAGTTA	2820
AACCGTCTGG GAATTCCTTA TGGTGTCTAT CTCTATACCT ATGCTGAAAA TGAGACCGAT	2880
GCTGAGAGTG ACGCTAAACA GACCATTGAA CTTATAAAGA AATACAATAT GAACCTGTCT	2940
TACCCTATCT ATTATGATGT TGAGAATTGG GAATATGTAA ATAAGAGCAA GAGAGCTCCA	3000
AGTGATACAG GCACTTGGGT TAAATCATC AACAAAGTACA TGGACACGAT GAAGCAGGCG	3060
GGTTATCAAA ATGTGTATGT CTATAGCTAT CGTAGTTTAT TACAGACGCG TTTAAACAC	3120
CCAGATATTT TAAAACATGT AAATGGGTA GCGGCCTATA CGAATGCTTT AGAATGGGAA	3180
AACCCCTATT ATTCAGGAAA AAAAGGTTGG CAATATACCT CTTCTGAATA CATGAAAGGA	3240
ATCCAAGGGC GCGTAGATGT CAGCGTTTGG TATTAAGCGA TGATTTGAAA GAGGGATGTG	3300

721

ATAGTAGCAC CCTCTTTTTC TTTGTTTTAT GATAGTTCAT CCTCGAGTAA ATTCAAGTTC	3360
TTGCTCGGAA ATGAAGCTTA TATAGTAGAT TGAATATAGA CAAATACCTT GTGATTGGTA	3420
AAACATTTTA GAAATTCATT TACCTTTCCT AATCGACTTG GTTTCATCTT ATTTCAATCT	3480
ATTATAGTAT TGGGGAATTT CTTCAAACCA CATCAGCTTG GTCAGTTCTA CCTGCGACCT	3540
CAAACTTGT GCTTTGGTCA AGCTGGGTTT AGTTTCCTAG TTTGCTGATG GATTTCCATT	3600
GACTATAAGC ATCCAACCCT CTTTTGTCT TCTAAAGAAT TCTTAAATTA TCAGTCTATT	3660
GCAACTTTTC TCATATAAGT TCTTTGTCTT GCTATTGGTT TTCCTTAGTA GTATACTAAG	3720
GTAGTAATCA TTAAGAAGTG GTTACAAAA ATAATGAATG AGGTAAAGAA AATGGTAGAA	3780
TTGAAAAAAG AAGCAGTAAA AGACGTAACA TCATTGACAA AAGCAGCGCC GG	3832

(2) INFORMATION FOR SEQ ID NO: 93:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10690 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

TGAAAAATC CTCATGAACC TGGCGCCAAT AGACAAGTGT CTGTGTTCCC TCACCTTCCT	60
TATAGGCATG GTCAGCTGAC ACTCGATTGA AGGGTTTAAC AGAAACCTTT GTAATTTCGA	120
CAATGCAGAC AGCCTGATTT TGAATATCTA AAATGACATC GAAGGTCCCT ACTTGGGGAA	180
GTGGTTCGTC TTCTAGCACA TAGAGGTCAT AGGCTGATGC TGTGCTGTC TTTTCTCCTT	240
TAAACACCAA ATCCGCTAAA AGGTCTGGTT CAACTCCAAA AGCCCAGGCA TCGATTTTCAT	300
CTCCGATCAA AGGATTGATT TGCTTGATTT TATTCACAT TTCTTGCGGT ATCATGGGTG	360
CTCCTTTGTA ATTTTITACT TTCTTCTTTT ATGTGTTTAA GATGATCTGG ATGGTCAATC	420
TCTAAATCAA AAATCTCTGG AATAGAACTG TAGTGGATAA TGCACTTGAT ACCCAAATGA	480
TTCAATTTTT GTATGAAAGA AGTATTCAGA TAGCCTGCTA CAGCAAAATC AATCTTGTTT	540
TTTCTTGCTT TATCCTGCAT ATCTCTTAGC ATATCTAACA TTATTGGACT TTCCATATCA	600
TGCCATTGAC TGTTTCTCAT AGTCGCAAAA ACAAAGGAAG TCAAATCATT CATTCCAAT	660
ACAACTTTTG AAATGCCCGT TTCCAGTATA CTAGATAAGT CAAAATACGC TGACGGTAAT	720
TCAATCATCG TTCCGACTTT CCCAGTAAAA CCCTGCTGAC GCAATACTGT AATAGCTTGT	780
TTTAATTGGT CGGCATCATT GACAAAAGGA AAGATAACAG ATAGATTGGG GTTGGTTTGA	840

722

TAAACTTCTG TAACGACATG TGCTTCAGCC TGAAATTCAT CCAAACACGC CAGTAAACGC	900
CTAGTTCCTC TATAGCCAAA CAAGGGATGC CCTTCGTCAA AAAACTCTTT AGTCCCCACT	960
AAACAATTGG CTTCTGTATT CGTTAATTCA GTAAAACGAT ACCAAACTTC CTTACCTAAG	1020
TAAAAGGAGC AAATAGTATC AAGATAATCT TTCACAAATT CCTGACAACT TTGTAATAGT	1080
ATATTTTGAT TGAGCTCTCT CAATAAGTAT TCCCCACGAA TCATGCCGAC GTGGTGAAAT	1140
AGTTGAGGAT AAATTTTTC AAGAATTTT TCGCCACTAA GGGCAAGTTG ATTTCTCATC	1200
ATTCACCTTC CAATTCATGT AAGAAGTCTT GTCCAGTTCT GGAAATCCTA ATAATTCAGA	1260
CTTAACCTTC AAGACTAATG GCGATGCATT TTCTTCTGTA ATCTCTTGAA TATCCATCCA	1320
AATATATCCA AGTGAATCAT TCGCACCATC AGACACAGCT TCCGAAATCG TAACTTGAGG	1380
TGCACTCTCA TTCATTTCAA CATCATACAA GGCTATGACA TGGTGAACCA TAAAATTTT	1440
TAACTCTTCC CTGACGAAAA CATCGTAGAT TCGAGGATTA GAGTAGCTTC TAACAGTAAA	1500
TCCCGTCTCT TCCATAACTT CTCTAGTCAG CGTTTCCGTC AGTCCTTCAC CAAGTTGCTG	1560
ACTGCCCTCA GGTAGATCAT ACCGATGTTG ATAAGGGCT CTCGTTTTT CAATGCAAAG	1620
TAACTTTCCA TTTTCAAAGC AAACACAGTA GACCCCAAAG TGATTTTTGA TTTCCATCCA	1680
ACTCCTCCTA CTTCAAAGAC CAGCCACCAT CTATTGTCAA GATTGTCTCT TGCATGGCGC	1740
TCGCTTTTCC ACTTGCTAAA AAAAGACTAA GCTCTGTAT TTCTCTGGC TCAATCCAGC	1800
GCTTGATTGG GGTTCACATA GCCACCCAGT CAGCCAAACC ACCTGGTTCA AAATCCGCAG	1860
CGGTCATAGC TGTCTGACT GCTCCTGGAG CGATACCAA GACCTGAATC CCAGCTTCAG	1920
CATAGTCTAG AGCCAACCTGC TTGGTGAAGC CAGCCAAGGC ATGCTTGAT GAAGTATAGG	1980
CGTGACCACC TCCACCTGCT AGGCTAGAAG CAATGGAACA CATATTGATG ATGATTCCT	2040
TTTTATTTTC CAGCATTTGT GTCAAATAAT ACCGAGTCAA CTCTACTGGA ATAATGTAGT	2100
TGATTTCAA AATCTCTTGA ATGTCCTGCG CCGTTTGTTC CAACAGTGGT TTGTAATCAT	2160
CCAAAACCTC AGCAGTATTA CACAAAACAT CCACCTGAGG GCACCAGTCA AAAATAGGTT	2220
CCAAGTCCAA GGTCAAATCT CTCGTAAAA AGCGAAAATC ACCCTCTAAG AGTGCTTTT	2280
CACCTTGGTC AACTCCATAA ACTTGATAGC CCTTCTCTAA AAAGAGGCGA GCTTGAGCCA	2340
ATCCGATCCC TGAACCTACT CCGTAATGA GTACACGTTT AGTCATGCAC TTCTACCCAA	2400
TCCGTTGCCA AAACATCACA AACTGTCGGG CTCCACATGG AAAAACCTTC TCCTTCGCCA	2460
GAAACGTTGA TTAGGAAATA AGGTGTCATT TCAAGTGCAA GCCCATTTT CTCGATGGTA	2520
TCAAAGAGTT GGACATAGTT TTCCGCACCT CCCCAACCAG TTCGTACATA TTTCTCTTA	2580
GCCTTTAACC CAGGCAGGAT CTCTTCAAAT GTCATGTTTT TCTCCTTAA TTCTACATTC	2640

723

TTCATTTAAT TATAGCAAAA AACCGCTTTA TACGGCTTTT TGAATGTGAG TTATTCAAAC	2700
CTGCTACTAC TTACGGCAAA TTATTCCCTG CAGCAAGATA AATTTCATAC CATTCCTTTTC	2760
TTGTTAAGCT AAAGTTTGCC GCTCGGCTAA CTTCTCTCAA GTGCTTAGGA TTTGTTGTAC	2820
CTACGACTGC CTGCATTTT GCTGGATAAC GCAATATCCA AGAAATGGCA ATAGTTGAAG	2880
AGGTTACTCC ATATTTAATA GCTAAACGAT CAAGTACTTG ATTTAAAGCT TGAAATTTCT	2940
CATTTC AAC AAAATTCCTT TTAATAATACC CGAATTGTAA GACAGACCAT GCTTGAATGA	3000
CCACATCGTG TAATTGGCAA TATTCAAAAA TGCTGCCATC TCGCATAGCT GCTTGACTAT	3060
CTTCCATATT AACATGAAAA GCTGATTCAA ATCCTGGAGT AAAAGCCGCA CTC AATTGTA	3120
GCTGATTAA AGCTAACGGC TGCTTGACAT CTTTTTTAAG CAACTCCATC ATCATAGGAT	3180
TTTGATTAGA AACTCCAAAA TCTCGAAGTT TACCTTGTTT ATAAAGGAGA TTAAAGGCTT	3240
CTGCTACTTG GTCAGATTCC ATCAAAGCAT CTGGTCGATG AAGGAGCAAG CTATCTAGAT	3300
GATCAATCTT CAATCTTTGC AAAATACCGT CTAAGTATTT TATAATATAG TCCTTAGAAA	3360
AATCAAAATA GGTAATTTCT TCAATGCGAA TGCCACATTT GGACTGAATC CACATCTTTT	3420
CTCTTAAATC TGGACGATTT TTTAGGACAA GACCTAACAG TTCTTCACAA CGACCACGAC	3480
CATAAATATC AGCCAAGTCG AAGGCATTGA TTCCAACAGA AAGTGCTGTT TCTACAAGCT	3540
CTTCAACTTC TTTTACAGAT TTATCTTTTA TTCTCATCAT TCCGAGAACA ATTTCTGATA	3600
ATTCTTTGTC ATCTTGACCA AGAGTTATGT ATCTCATCAA ATTTTCTCTCC TTTAATTTCT	3660
AACATTCTTC CCTTCATTAT AACAAAAAAC CGCTTTGCAA CGACTTTTGT ACTATACTTC	3720
ACTCCATTTT ATCTTCTTAA ACCCAGCGAA CAAGACAAAG ATTCCAATAA AGAGGACAGC	3780
TAAAGGAATA ACTTTTGTA GGAACACATT TGAAATTTCC ATCCACTCAT AATAACGGAG	3840
CAGAGAACCC ACCACAAGAT GGGCAATAAT CATACTGACA AATGGACGAA AGACCCTTC	3900
TTTCCAATTC CAAATACCGA TAACTAGCGA AATCGTAAAG ACAGACAAAC TATCCAGGG	3960
AGCCGGAATA TAAAAGGCTC CTTCTTGAT GAAGCTTGCC ATTCCTACAT ATCCTAAAAC	4020
AACTAGAAGA ACTATAGTCC CAACAACAAT GTAAGTGCCA ATTTTCATTT TAGGAGAATC	4080
TTGGACTAAA CTTCTTCGTA AAATTGTGGC CACAAGTCCA AATCCAATCA GAAAAATAAG	4140
AAGTTGCCCT AAAAATGTGA GCAAATTGAC TGTTAAGAGA GGACCTTTAG AAAAATCACT	4200
TAGTAGTTGA TAATAACGTA ATACCGCCAG GACAAGAATT GGCGTCAAAA GGGACTCTTT	4260
GATAGAACTG CGAGGTGCTC CCTTGAGAAT CTCTTTCATT ATTTTCTTAG GATTCTTACC	4320
TAGATAATCC TCTGCACTCA TGCCATCTCG TTCTGCTTCT GAGAAATCTA GCATCATCAA	4380

724

ATAGATCTGC TCTCTGAGAT AGTCTTCATC ATAGAGAAAT CCAGCAAGAT TAAAACTTTC	4440
CCACAACTCC TCAAAATACT TTTGATTCTC CTCAGAAAAC TCATGTAGCA AAGCGCTTGT	4500
TTCTTCGTAA TACTTCATTT TCTTCATGGT TTAACCCCA TTCTTAATCC CTTCTACTTT	4560
TTGACTCAAA TCGTCCCATT GTTGCCAAA GACTGAGACA CGCTCTTCTC CTTCTTTCAT	4620
TAATGAAAA TACTTCCGAT CTGGACCATC TGGCGACGG CGCATGTCGC CTCTTATCCA	4680
TTGATTTTTT TCTAACTTTT GCAACAAAG ATAAATAGTT CCTGGAACGA TAGTATCAAA	4740
TCCAGCCTCT CGCAAAGTCT GAACCAACTC ATAACCATAC CGCTCTTTTT GACCAATCAT	4800
ATCCAAGACA CAACCTTCAA GAACACCTTT TAATAGCTGA GTTCTTTCA TCACTTCTCC	4860
CTTCTAATCT ATTTTGTAAT ACCTACTAGT GACTTCACCT ATAGTATATC ACTTCTACAC	4920
TAGTTTGTA AGCATAATAG TTAATACTCT TCGAAAATCT CTTCAAACCA CGTCAGCGTC	4980
GCCCTACCGT ATGTATGGTT ACTGACTTCG TCAGTTTCAT CTACAACCTC AAAACATGT	5040
TTTGAGCTGA CTTGTCAGT TTCATCTACA ACCTCAAAAC AGTGTTTTGA GCTGACTTCG	5100
TCAGTTTCAT CTACAACCTC AAAACAGTGT TTTGAGCTGA CTTGTCAGT TTCATCTACA	5160
ACCTCAAAAA CATGTTTGA GCTGACTTCG TCAGTTTCGT CTACAACCTC AAAACAGTGT	5220
TTTGAGCAAC CTGCGGCTAG CTTCTAGTT TGCTCTTTGA TTTTCATTGA GTATAAATAA	5280
AAAAACAGAA CTAGCCTGAA CTAGTCCTGT CTACTTTTAC CCAATCACAC TTCCATTGG	5340
TACAGCTGGA TCAACTGTGA GAAGGGTTAA TTTGCCATCA TGTTCAGCTG AGAGAATCAT	5400
ACCTGGCTG ACATATTTTT TCATCATTTT ACGTGGTTTG AGGTAGCAA CGATTTGAAC	5460
TTTCTTGCG ACCAATTCCT GTTCATTGG ATAGTATTTT GCAATTCCTG AAAGAATCTG	5520
ACGATCTTCT CCATCACCAG CATCCAAGCG GAATTGAAGC AACTTATCTG AACCTTCTAC	5580
TTTAGACACT TCTTTGACTT CTGCGACACG GATTTCAACC TTGTCAAAGT CTTCAAACCT	5640
GATTTTCATCC TTGTTTAGTT TGAGCTCAAC TTCGTCCGGA TTCCATTCTT TTTGACTGC	5700
TGGTTTATTG CCTTCCATTT GTTCCTTGAT ATAGGCGATT TCTTCTTCCA TATTTAGACG	5760
TGGAAAGATA GGTGTTCTT TGGCAACTAC AGTCACATCT GCTGGGAAGT CAGCCAACT	5820
CAAGTTTCA AGACTAGAAA CTTCTTCCAA ACCAAGTTGA GTCAAAACTG CAGGACTAGT	5880
TTCCATCATA AATGGTTCAA TCAAGTGAGC AACTACACGA ATGCTGGCTG CCAAGTGGCT	5940
CATGACACTT GCCAATTGGT CACGAAGAGC TTCATCCTTG GCCAAGACCC ATGGTGGGGT	6000
CTCATCGATG TATTTATTGG TACGAGAGAT CAGAGTCCAG ACTGCTTCAA GCGCACGTGG	6060
ATAGTCAACT GCTTCCATGT GTGTATGGAA GTCTGCGATT GATTGTWCTG CAACCTCAGC	6120
AAGAACATGA TCATATTCAG TCACACCTTC TACATAGGCA GGGATTTGTC CATCAAAGTA	6180

725

CTTATTAATC ATGGAAACCG TACGGTTAAG GAGGTTCCCA AGGTCATTAG CCAATTCATA	6240
GTTGATACGG CCGACATAGT CTTCAGGAGT AAAGGTTCCG TCTGAACCAA CTGGAAGGTT	6300
ACGCATGAGG TAGTAACGAA GTGGATCTAG TCCATAACGC TCTACCAACA TTTCAGGGTA	6360
AACGACATTC CCTTTTGA CT TAGACATTTT TCCGTCTTTC ATGACAAAACC AACCATGGGC	6420
AATCAAACGA TCAGGTAATT TAACATCCAA CATCATAAGA AGGATTGGCC AGTAGATAGA	6480
GTGGAAGCGA AGGATATCTT TTCTTACCAT ATGGAAGACT GTTCCATTCC AGAACTTGTC	6540
AAAGTTACCA TGTTCTGCTT GAGCGTAGCC AAGAGCTGTC GCATAGTTAA GAAGGGCATC	6600
AATCCAAACG TAGACAACGT GTTTTGGATT TGATGGGACA GGCCTCCCC ATGTAAAGGT	6660
TGTACGAGAT ACCGCCAAAT CTTCCAAGCC TGGCTCGATG AAGTTGCGTA GCATTTTCATT	6720
AAGGCGACCA TCTGGCGTGA TAAATTCAGG ATGAGCTTTG AAAAATTCGA CCAAACGGTC	6780
TTGGTATTTC CTAAGGCGAA GGAAGTATGA TTCTTCAGAA ACCCATTCAA CCTCATGACC	6840
TGATGGAGCA ATACCACCAG TCACATTTCC AGCTTCATCA CGGAAAACCT CTGCCAGCTG	6900
GCTTTCTGTA AAGAATCTT CGTCTGATAC TGAATACCAA CCAGAGTATT CACCCAAGTA	6960
GATATCATCT TGAGCAAGTA AGCGTTCAAA GACTTGTGCG ACAACTTTTT CATGGTAGTC	7020
ATCAGTTGTA CGGATAAATT TATCGTATGA GATATCTAGT AATTGCCAGA GTTCTTTAAC	7080
TCCAACCGCC ATTCCATCAA CATAGGCTTG AGGTGTAATA CCAGCTTCTT CCGCTTTCTG	7140
CTGGATTTTC TGACCATGTT CATCAAGACC TGTCAGATAA AATACATCGT AGCCCATCAG	7200
GCGTTTGTA CGTGCTAGGA CATCACATGC GATAGTTGTG TAGGCAGAAC CGATATGAAG	7260
TTTCCCAGAT GGATAGTAAA TCGGCGTTGT AATATAAAAA TTTTTCAG ACATAATTTT	7320
TCCTTTCCAG GCAAATGAAA CCTGTTTTTC TAACACTTCA TTATATCACA TTTTAAATGA	7380
ATTTCAATAG GGAATCCAT ACAAAAACAA GATAGACGAG TGTCCATCTT GTTGATCTCA	7440
TTCATAACGA AGGGCTTCAA TTGGATCAAG TTTTCATGCC TTGTTGGCTG GCAAGACTCC	7500
AAAAATCATA CCAACACTAG CCGAACTGC AAGACTAAAT AGGGCGACTG GGATTGATAC	7560
TCCAACCTCT ATACCTTCTA TTAACCTTG CAGTAACAAA CCTGCTAAG CAGTTAAACC	7620
ACTTGCAATT GTCAAGCCAA TTAAGCCACC TAACAAGGTC AAAATCATGG ATTCAATCAA	7680
AACTGAATT AAAATATTGG CACGTGTTGC ACCCAAAGCC TTACGAAGAC CAATCTCACG	7740
AGTGCGCTCT GTCACCGAAA CCAGCATGAT GTTCATGACA CCAGTTCTTC CAACAAAGAG	7800
AGAAATCCCT GCGATGGAAC TAATAATCGT CGTCATAAAA CTAAACGATT GTTGAATTTT	7860
TGCAAATACA ACGGACTCAT CTGCCACCTG GTATTCTCCC TGTGTAAAGC CTGCAAGCTC	7920

726

TGTCATTTT CGTGCCAGTT CTGGACCCAG AGTTGGGGTT AACTGGTAT CATTCACCTCG	7980
AAAGACAATA TTAGCTATTT CATCTACATT AAAATTCGCA GCAAGGGAGA TATTGGTAGT	8040
AATAGGCAAG CCACCAAACC CATATATTTT TGATCTTTTA GCCTCCGGAC TAGTATAAAC	8100
CCCAATGACC CGGTAACATA ATCCATTGAC TTCTACAACC TTGTTAATAG CCTCTTGAGG	8160
AGATTCAAAT AACTAATGG ACAATTCCTC ATCTAGCAAA ATGACACTTG CAAACTCTTT	8220
GAAATCTTGC TCTCTCAGAC TACGACCTGC AATAATTTC TCTTAACAG CGTCCATGTA	8280
AGTTCTGTTT CCACCTGTCA AATTAGCATT CTCAACCTTT TTATCTTGAT AGGTCAAGAT	8340
GGCATTCGTT GAATTGGTTA CATAGTAAT ATCCACTCCC TTCAGTTTAG CTGCCTCTTG	8400
GACCCAGGAT TCTTGCGGTT TTGGCGGTT AACAGGAACT TCCTCTTCCT TTCCAGAAAC	8460
CGTAAAGCT GATTGTTTCT GAGTAAAGA CCCGTCTTTA CTTTTTTTAG GAGAGAAAAA	8520
GACGCTAATA TTTTCTGAG ATTTAGTCAT ATCTTTATTG ACTTGACGAG ATAGGGAATC	8580
ACCCAAAGCC ATAATCACA CAACTGATGA AACACCGATA ATAATCCCA TCATAGTAAG	8640
CAAAGAACGC ATCTTGAGAG CCATGATAGA TGAAAAGGCA AATTCAGAT TCTGCATCTT	8700
AGTTTTCTC CTTTCCTAAC TGAGCACTGT CAGACGAAAT GACCCCATCC CGAATGACAA	8760
TCTGACGTTT GGCATAGGCA GCAATCTCAG GCTCATGCGT TACCATGATA ATGGTTTTC	8820
CTTCTTTATT CAAATCAACC AATAATGCA TAATTTGGTT ACCTGTTTGT GTATCCAAGG	8880
CTCCTGTCGG TTCATCCGCT AGGATAATAG AAGGATTGTT TACCAAGGCA CGCGCAATGG	8940
CTACACGTTG CTTTGGACCA CCAGATAATT CTGAAGGTAA ATGGTGAATA CGTTCTGTCA	9000
ATTCAACCTT GTCTAAATAT TCCTCAGCCA ACTTGCGACG TTTTGAAGAC GAAACTCTG	9060
CGTAAATCAA GGGCAATTCT ACATTTTGCA GAGCATGAG CTTCGATAGA AGAAAGAACT	9120
GCTGAAAGAC AAAACCGATT TGTGTTTAC GGACCTTAGC TAGTTGTTTT TCACCAAGCC	9180
CAGCCACTTC TTGACCTTCA AGATAATATT CTCCACTGGT TGGTGTATCC AACATGCCAA	9240
TCGTATTTCAT CAGAGTGGAC TTACCAGACC CAGATGGTCC CATGATGGCT ACAAATTCAC	9300
CCTCATTCAC TTCTAGATTG ATATTTTGA GAACCTGCAG TTCTTGGTCA CCATTACGGT	9360
AACTTCTGAA GATATTTTTT AGACTAATTA GTTGCTTCAT CAGCCTTCAC CTCTTTTCCT	9420
TCTTCCAAGG AAGATGTTGG ATTACTGATG ACCTTAGCAC CGTTCGTAA ACCAGAAGTG	9480
ATTTCTTGAT TTTCTGCGTC AGCATTTCCC AATGAAACCT CAACTTTTTT AGCCTTTTGT	9540
TGTTTCATCCA CAATCCAGAC ATAATTTTCTA CTATCATCCA TTACTAGACT GCTAACAGGA	9600
ACAAGAATAG CCTTAGTTT GCTTTTAACC TCAATGTTGA CAGAAAAACC TTGTTTCAAA	9660
TCACCAACCT CGCCTGTCAC ATCAATAGTA TAAGGTATT TAGAACCTGT ATTATTCCCCG	9720

727

GCTGCTGGAC TAGCTGCTTC ACCATTGTTT TTAGGATAGT CAGAAATATA GCTTAATTTC	9780
CCAGTCCATT TTTTATCAGG ATACACTTTA GAAGTAAAGC TTACTTCTTG ACCTACAGAA	9840
AGGTTGGCTA GATTGTACTC AGACAATTCT CCCTTGACTT GTAAATTTTC ATTGCTGACA	9900
ATATGAACCA TAACTTGACT CGCCCCTGTT GGAGATTTAG AAACATTGCT ATTGACTTCG	9960
ACCACAGTTC CCTCTAGGGT ACTGAGAACA GTTGTTCAT CCAATTGACT TTGAGCCTTG	10020
CTTAATTGCG CCGCAGCATC TGCACGCGCA TCACGGGCAT CACCCAATTG AGCGTCAATA	10080
GAAGCAACAG AATTTCAGC CACTGGAGTT GGGCTTTGCA CCGTTGCATC TTCTCCTCCT	10140
ACTGGCGCTG GTAAGTGTGG AGCCGGAGCT GAAGCGGCTT CATTTCTGTC TTGATTGAGT	10200
TCATTGATAT GACGATCTGC CCTAGCTACT GCTCGACTAG CTGAATCATA GGCCGCCTGC	10260
GCTTCTGAAC TACTGTACTT GACTAAAGCC TGCCCTTCGC TGACCTTATC GCCCACAGAA	10320
ACAAGGATTT CATCTAAATC ACCCTTACTA GCATCAAAAT AAACATATTG TTCATTTTTT	10380
GCTGTACTG TCCCTGACAA TAAACAGAG GAGGCCACGC TTCCTTCCTT GGCAACAACA	10440
AGATGAGTAG GCTCATCTTT TAGAGCAGTC TGAGAAGGTT GTCTAAAGAG TAAATCCCC	10500
CCAGCACCCA ATACAACTAC ACTCGCAGCA CCGATTGCTG CATAAGTTG CCACTTTTTA	10560
GCTTTACCAT TCTTTTTCTT CATAATGAAA CTCCTTTCT TTTTACAAT ACTTGCTAT	10620
TATACCAAAT TTCCCTCCAG CAAACAATAC AGTTCAGGAT TAAACAATCG TTCGGAATTT	10680
TGCTTTTCGG	10690

(2) INFORMATION FOR SEQ ID NO: 94:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8195 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

GAGAAAGCGC CCACGTTTCC CCGAAGGGAG AAAGGCGGAC AGGTATCCGG TAAGCGGCCA	60
GGGTCGGAAC AGGAGAGCGC AACGAGGGAG CTTCCTCAGG GGAAACGCCT GGTATCTTTA	120
TAGTCCTGTC GGGTTTCGCC ACCTCTGACT TGAGCGTCGA TTTTGTGAT GCTCGTCAGG	180
GGGCGGAGC CTATGGAAAA ACGCCAGCAA CGCGGCCTTT TTACGGTTCC TGGCCTTTTG	240
CTGGCCTTTT GCTCACATGT TCTTTCCTGC GTTATCCCCT GATTCTGTGG ATAACCGTAT	300
TACCGCCTTT GAGTGAGCTG ATACCGCTCG CCGCAGCCGA ACGACCGAGC GCAGCGAGTC	360

728

AGTGAGCGAG GAAGCGGAAG AGCGCCCAAT ACGCAAACCG CCTCTCCCG CGCGTTGGCC	420
GATTCATTAA TGCAGCTGGC ACGACAGGTT TCCCGACTGG AAAGCGGGCA GTGAGCGCAA	480
CGCAATTAAT GTGAGTTAGC TCACTCATTA GGCACCCAG GCTTTACACT TTATGCTTCC	540
GGCTCGTATG TTGTGTGGAA TTGTGAGCGG ATAACAATTT CACACAGGAA ACAGCTATGA	600
CaTGATTACG AATTCGAGCT CGGTACCCGG AAAATCCAGA AAATGCTTGA AAAAAATCCT	660
AGAAGATGGT ATAATACTAA ATTGTAAGGG TTATCACATA TAACTCAAAA AAAGAAAGAA	720
CAAAAGGAGA GTCAAATAT GGCTTCTAAA GATTTCCACG TAGTGGCAGA AACAGGTATT	780
CACGCACGTC CAGCAACATT GTTGGTACAA ACTGCTAGCA AATTTGCTTC AGATATCACT	840
CTTGAGTACA AAGGTAAATC AGTTAACCTT AAATCAATTA TGGGTGTTAT GAGTCTTGCT	900
GTTGGCCAAG GTGCTGACGT AACTATCTCA GCTGAAGGTG CAGATGCAGA TGACGCTATC	960
GCTGCAATCT CAGAAACAAT GAAAAAGAA GGATTGGCAT AAGGGAAATG ACAGAAATGC	1020
TTAAAGGAAT CGCAGCATCT GACGGTGTG CAGTTGCAA AGCATATCTA CTCGTTCAGC	1080
CGGATTTGTC ATTTGAGACT ATTACAGTCG AAGATACAAA CGCAGAAGAA GCTCGCCTTG	1140
ATGCCGCTCT ACAGGCATCA CAAGACGAGC TTTCTGTTAT TCGCGAGAAA GCAGTAGGTA	1200
CGCTCGGTGA AGAAGCAGCT CAAGTTTTG ATGCTCACTT AATGGTTCTT GCTGACCCAG	1260
AAATGATCAG CCAAATCAAG GAACTATCC GTGCGAAGAA AGTGAATGCA GAAGCAGGTC	1320
TGAAAGAAGT TACAGATATG TTTATCACTA TCTTTGAAG CATGGAAGAC AACCCATACA	1380
TGCAAGAACG CGCAGcGGAT wTCCGCGAGC TGCAAAAACG TGTATTGCA AACCTTCTTG	1440
GTAaaaaaAT GCCAAACCCA GCTTCTATCA ATGAAGAAGT GATTGTGATT GCGCATGACT	1500
TGACTCCTTC AGATACAGCT CAATTGGACA AAACTTTGT AAAAGCTTTT GTAACCAACA	1560
TTGGTGGACG TACAAGCCAC TCAGCTATCA TGGCACGTAC ACTTGAAATT GCTGCTGTAT	1620
TAGGTACAAA TAACATCACT GAAATCGTTA AAGACGGTGA CATCCTTGCT GTTAACGGGA	1680
TCACTGGAGA AGTGATTATC AACCCAACAG ATGAACAAGC GGCAGAATTT AAAGCAGCTG	1740
GTGAAGCCTA TCGGAAACAA AAAGCTGAAT GGGCACTTTT GAAAGATGCT CAAACAGTGA	1800
CTGCTGACGG TAAACACTTC GAGTTGGCTG CTAATATCGG TACTCCAAAA GACGTTGAAG	1860
GTGTTAACAA CAACGGTGCA GAAGCTGTTG GACTTTACCG TACAGAGTTC TTGTACATGG	1920
ATTCTCAAGA CTCCCAACT GAAGATGAGC AGTATGAAGC ATACAAGGCT GTTCTTGAAG	1980
GAATGAACGG TAAACCTGTT GTCGTTGTA CAATGGATAT CGGTGGAGAT AAGGAACTTC	2040
CTTACTTCGA TATGCCTCAC GAAATGAACC CATTCCTTGG ATTCCGTGCT CTTCGTATCT	2100
CTATCTCTGA GACTGGAGAT GCTATGTTCC GCACACAAAT CCGTGCTCTT CTTCGTGCGT	2160

CTGTTACCGG TCAATTGCGT ATCATGTTCC CAATGGTTGC GCTCTTGAAA GAATTCCTG	2220
CAGCGAAAGC AGTCTTTGAT GAAGAAAAAG CAAACCTTCT TGCTGAAGGT GTTGCAAGTTG	2280
CGGATAACAT CCAAGTTGGT ATCATGATCG AGATTCCTGC AGCGGCTATG CTTGCAGACC	2340
AATTTGCTAA AGAAGTTGAC TTCTTCTCAA TTGGTACAAA CGACTTGATC CAATATACAA	2400
TGGCAGCAGA CCGTATGAAC GAACAAGTTT CATACCTTTA CCAACCATAC AATCCATCAA	2460
TCCTACGCTT GATTAACAAT GTGATCAAAG CAGCTCACGC TGAAGGTAAA TGGGCTGGTA	2520
TGTGTGGTGA GATGGCTGGT GACCAACAAG CTGTTCCACT TCTTGTCGGA ATGGGCTTGG	2580
ATGAGTTCTC TATGTCAGCA ACATCTGTAC TTCGTACACG CAGCTTGATG AAGAACTCG	2640
ACACAGCTAA GATGAAGAG TACGCAAACC GTGCCCTTAC AGAATGCTCA ACAATGGAAG	2700
AAGTTCTTGA ACTTCAAAA GAATACGTTA ATTTTGATTA ATCGAAAAGT CCCTGCAACT	2760
CAGTTACAGG GATTTTGTG ATATTTTAAA AAGAATTTTC AAGAAAATCT TTCTTATAGA	2820
AAGTCCAACC TTGAAAAAGT AGTGGTCAGA AAAAAAATA CTAAATGGT TCATAAAATT	2880
CTTGACAAGT TGGATATTTA GGAGTAACT ATTAACCAGT TAAGTAATAG AGAGGAGTTT	2940
CTGCAATTTA GAAATGAATT GCAACTAGAA ATATCAAATA GAAAGAGAGT TTCGATGAAA	3000
ATTAATAAGA AATACCTTGT TGGTCTGCG GCACTTTGAT TTTAAGTGTT TGTCTTACG	3060
AGTTGGGACT GTATCAAGCT AGAACGGTTA AGGAAAATAA TCGTGTTCCT TATATAGATG	3120
GAAACAAGC GACGCAAAA ACGGAGAATT TGACTCCTGA TGAGGTTAGC AAGCGTGAAG	3180
GAATCAATGC TGAGCAAATC GTCATCAAGA TAACAGACCA AGGCTATGTC ACTTCACATG	3240
GCGACCACTA TCATTATTAC AATGGTAAGG TTCCTTATGA CGCTATCATC AGTGAAGAAT	3300
TACTCATGAA AGATCCAAAC TATAAGCTAA AAGATGAGGA TATTGTTAAT GAGGTCAAGG	3360
GTGGATATGT TATCAAGGTA GATGGAAAAT ACTATGTTTA CCTTAAGGAT GCTGCCCACG	3420
CGGATAACGT CCGTACAAA GAGGAAATCA ATCGACAAA ACAAGAGCAT AGTCAACATC	3480
GTGAAGGTGG AACTCCAAGA AACGATGGTG CTGTTGCCTT GGCACGTTTCG CAAGGACGCT	3540
ATACTACAGA TGATGGTTAT ATCTTTAATG CTTCTGATAT CATAGAGGAT ACTGGTGATG	3600
CTTATATCGT TCCTCATGGA GATCATTACC ATTACATTCC TAAGAATGAG TTATCAGCTA	3660
GCGAGTTGGC TGCTGCAGAA GCCTTCCTAT CTGGTCGAGG AAATCTGTCA AATTCAAGAA	3720
CCTATCGCCG ACAAATAGC GATAACACTT CAAGAACAAA CTGGGTACCT TCTGTAAGCA	3780
ATCCAGGAAC TACAAATACT AACACAAGCA ACAACAGCAA CACTAACAGT CAAGCAAGTC	3840
AAAGTAATGA CATTGATAGT CTCTTGAAAC AGCTCTACAA ACTGCCTTTG AGTCAACGAC	3900

730

ATGTAGAATC TGATGGCCTT GTCTTTGATC CAGCACAAAT CACAAGTCGA ACAGCTAGAG	3960
GTGTTGCAGT GCCACACGGA GATCATTACC ACTTCATCCC TTA CTCTCAA ATGCTCTGAAT	4020
TGGAAGAACG AATCGCTCGT ATTATTCCTT TTCGTTATCG TTCAAACCAT TGGGTACCAG	4080
ATTCAAGGCC AGAACAAACCA AGTCCACAAC CGACTCCGGA ACCTAGTCCA GGGCCGCAAC	4140
CTGCACCAAA TCTTAAAATA GACTCAAAT CTCTTTGGT TAGTCAGCTG GTACGAAAAG	4200
TTGGGGAAGG ATATGTATTC GAAGAAAAGG GCATCTCTCG TTATGCTCTT GCGAAAGATT	4260
TACCATCTGA AACTGTTAAA AATCTTGAAA GCAAGTTATC AAAACAAGAG AGTGTTCAC	4320
ACACTTTAAC TGCTAAAAA GAAAATGTTG CTCCTCGTGA CCAAGAATTT TATGATAAAG	4380
CATATAATCT GTTAACTGAG GCTCATAAAG CCTTGTTTGA AAATAAGGGT CGTAATCTCTG	4440
ATTTCCAAGC CTTAGACAAA TTATTAGAAC GCTTGAATGA TGAATCGACT AATAAGAAA	4500
AATTGGTAGA TGATTTATTG GCATTCCTAG CACCAATTAC CCATCCAGAG CGACTTGGCA	4560
AACCAAATTC TCAAATTGAG TATACTGAAG ACGAAGTTCG TATTGCTCAA TTAGCTGATA	4620
AGTATACAAC GTCAGATGGT TACATTTTGG ATGAACATGA TATAATCAGT GATGAAGGAG	4680
ATGCATATGT AACGCCTCAT ATGGGCCATA GTCACTGGAT TGGAAAAGAT AGCCTTTCTG	4740
ATAAGGAAAA AGTTGCAGCT CAAGCCTATA CTAAAGAAA AGGTATCCTA CCTCCATCTC	4800
CAGACGCAGA TGTTAAAGCA AATCCAAC TGAGATAGTGC AGCAGCTATT TACAATCGTG	4860
TGAAAGGGGA AAAACGAATT CCACTCGTTC GACTTCCATA TATGGTTGAG CATAAGTTG	4920
AGGTTAAAA CGGTAATTTG ATTATTCCTC ATAAGGATCA TTACCATAAT ATTAAATTTG	4980
CTTGGTTTGA TGATCACACA TACAAAGCTC CAAATGGCTA TACCTTGGA GATTGTTTG	5040
CGACGATTAA GACTACGTA GAACACCCTG ACGAACGTCC ACATTCTAAT GATGGATGGG	5100
GCAATGCCAG TGAGCATGTG TTAGGCAAGA AAGACCACAG TGAAGATCCA AATAAGAACT	5160
TCAAAGCGGA TGAAGAGCCA GTAGAGGAAA CACCTGCTGA GCCAGAAGTC CCTCAAGTAG	5220
AGACTGAAAA AGTAGAAGCC CAACTCAAAG AAGCAGAAGT TTTGCTTGCG AAAGTAACGG	5280
ATTCTAGTCT GAAAGCCAAT GCAACAGAAA CTCTAGCTGG TTTACGAAAT AATTGACTC	5340
TTCAAATTAT GGATAACAAT AGTATCATGG CAGAAGCAGA AAAATTACTT GCGTTGTTAA	5400
AAGGAAGTAA TCCTTCATCT GTAAGTAAGG AAAAAATAAA CTAATGAAAA ATGAAAGTCT	5460
CGATAAAGAG GCTTTCATTT TTATTATGTA TATATGTAAA ATTCTTGACA AGCAATATTA	5520
AAAAGAGTAA ACTATTAAC AGTTAATTAA CCGGTTTATT ACTTTATAGT GAATCAAATA	5580
TACTTAAGAA AAGAGGAAAG AATGAAAT AATAAAAAAT ATCTAGCAGG TTCAGTGGCA	5640
GTCTTGCCC TAAGTGTGTTG TTCCTATGAA CTTGGTCGTC ACCAAGCTGG TCAGGTTAAG	5700

731

AAAGAGTCTA ATCGAGTTkC TTATATAGAT GGTGATCAGG CTGGTCAAAA GGCAGAAAAC	5760
TTGACACCAG ATGAAGTCAG TAAGAGGGAG GGGATCAACG CCGAACAAAT CGTCATCAAG	5820
ATTACGGATC AAGGTATATGT GACCTCTCAT GGAGACCATT ATCATTACTA TAATGGCAAG	5880
GTCCCTTATG ATGCCATCAT CAGTGAAGAG CTCCTCATGA AAGATCCGAA TTATCAGTTG	5940
AAGGATTCAG ACATTGTCAA TGAAATCAAG GGTGGTTATG TTATCAAGGT AGATGGAAAA	6000
TACTATGTTT ACCTTAAGGA TGCAGCTCAT GCGGATAATA TTCGGACAAA AGAAGAGATT	6060
AAACGTCAGA AGCAGGAACA CAGTCATAAT CACGGGGGTG GTTCTAACGA TCAAGCAGTA	6120
GTTGCAGCCA GAGCCCAAGG ACGCTATACA ACGGATGATG GTTATATCTT CAATGCATCT	6180
GATATCATTG AGGACACGGG TGATGCTTAT ATCGTTCCTC ACGGCGACCA TTACCATTAC	6240
ATTCCTAAGA ATGAGTTATC AGCTAGCGAG TTAGCTGCTG CAGAAGCCTA TTGGAATGGG	6300
AAGCAGGGAT CTCGTCCTTC TTCAAGTTCT AGTTATAATG CAAATCCAGC TCAACCAAGA	6360
TTGTCAGAGA ACCACAATCT GACTGCTACT CCAACTTATC ATCAAAATCA AGGGGAAAAC	6420
ATTTCAAGCC TTTTACGTGA ATTGTATGCT AAACCCCTAT CAGAACGCCA TGTGGAATCT	6480
GATGGCCTTA TTTTCGACCC AGCGCAAATC ACAAGTCGAA CCGCCAGAGG TGTAGCTGTC	6540
CCTCATGGTA ACCATTACCA CTTTATCCCT TATGAACAAA TGTCTGAATT GGAAAAACGA	6600
ATTGCTCGTA TTATTCCCTT TCGTTATCGT TCAAACCATT GGGTACCAGA TTCAAGACCA	6660
GAACAACCAA GTCCACAATC GACTCCGGAA CCTAGTCCAA GTCCGCAACC TGCACCAAAT	6720
CCTCAACCAG CTCCAAGCAA TCCAATTGAT GAGAAATTGG TCAAAGAAGC TGTTCGAAAA	6780
GTAGGCGATG GTTATGTCTT TGAGGAGAAT GGAGTTTCTC GTTATATCCC AGCCAAGGAT	6840
CTTTCAGCAG AAACAGCAGC AGGCATTGAT AGCAAACTGG CCAAGCAGGA AAGTTTATCT	6900
CATAAGCTAG GAGCTAAGAA AACTGACCTC CCATCTAGTG ATCGAGAATT TTACAATAAG	6960
GCTTATGACT TACTAGCAAG AATTCAACCA GATTTACTTG ATAATAAAGG TCGACAAGTT	7020
GATTTTGAGG CTTTGGATAA CCTGTTGGAA CGACTCAAGG ATGTCyCAAG TGATAAAGTC	7080
AAGTTAGTGG ATGATATTCT TGCCTTCTTA GCTCCGATTC GTCATCCAGA ACGTTTAGGA	7140
AAACCAAATG CGCAAATTAC CTACACTGAT GATGAGATTC AAGTAGCCAA GTTGGCAGGC	7200
AAGTACACAA CAGAAGACGG TTATATCTTT GATCCTCGTG ATATAACCAG TGATGAGGGG	7260
GATGCCTATG TAACTCCACA TATGACCCAT AGCCACTGGA TTAAAAAAGA TAGTTTGTCT	7320
GAAGCTGAGA GAGCGGCAGC CCAGGCTTAT GCTAAAGAGA AAGGTTTGAC CCCTCCTTCG	7380
ACAGACCATC AGGATTCAGG AAATACTGAG GCAAAAGGAG CAGAAGCTAT CTACAACCGC	7440

732

GTGAAAGCAG CTAAGAAGGT GCCACTTGAT CGTATGCCTT ACAATCTTCA ATATACTGTA	7500
GAAGTCAAAA ACGGTAGTTT AATCATACCT CATTATGACC ATTACCATAA CATCAAATTT	7560
GAGTGGTTTG ACGAAGGCCT TTATGAGGCA CCTAAGGGGT ATACTCTTGA GGATCTTTTG	7620
GCGACTGTCA AGTACTATGT CGAACATCCA AACGAACGTC CGCATTCAGA TAATGGTTTT	7680
GGTAACGCTA GCGACCATGT TCGTAAAAAT AAGGTAGACC AAGACAGTAA ACCTGATGAA	7740
GATAAGGAAC ATGATGAAGT AAGTGAGCCA ACTCACCTTG AATCTGATGA AAAAGAGAAT	7800
CACGCTGGTT TAAATCCTTC AGCAGATAAT CTTTATAAAC CAAGCACTGA TACGGAAGAG	7860
ACAGAGGAAG AAGCTGAAGA TACCACAGAT GAGGCTGAAA TTCCTCAAGT AGAGAATTC	7920
GTTATTAACG CTAAGATAGC AGATGCGGAG GCCTTGCTAG AAAAAGTAAC AGATCCTAGT	7980
ATTAGACAAA ATGCTATGGA GACATTGACT GGTCTAAAAA GTAGTCTTCT TCTCGGAACG	8040
AAAGATAATA ACACTATTTT AGCAGAAGTA GATAGTCTCT TGGCTTTGTT AAAAGAAAGT	8100
CAACCGGCTC CTATACAGTA GTAAAAAGT TGGAGCATAT TTTATGGAGA AGTAACCTTT	8160
CGTGTTACTT CTCTTTTTTA GAAAAACGTA ACAGA	8195

(2) INFORMATION FOR SEQ ID NO: 95:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 2004 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

TTTACTAAAA GGAAAAAGA ACTGATTCTT CAGTCCTTCA TTAATCTTAT TCCACACTAA	60
ATAGGTATGG GTAAACAGGT TGTGACCTT GGTGAATCTC GACTTCAACG TCTTCGAATT	120
CTTCTACGAT TTCTTGAGCG ATTTTCATTGG CAAGTTCTTC GCTTCCGTCT TCACCTACAT	180
AGAAGGTTAC GATTTCACTG TCTTCATCCA ACATATGTTT CAAGGTTTCA GTCAATGTTT	240
GGTGCAATC AGGGTTTGAC ACAAGAATTT TTCCATCCAC CATACCTAAA TTATCGTTTT	300
CATGGATTTC TAAGCCATCG ATCGTTGTAT CACGCACGGC TGTGTGACG CTTCCGCTAA	360
CGACATCGCT AAGAGCAGCT GTCATACGCT CTTGGTTTTT TTCAATGGAC TTGCTTGGAT	420
CAAAGGCAAG AAGACTTGTC ATACCTTGAG GAAGAGTGCG AGCCTCTACC ACTACCGCTG	480
GTTGCTCCAA AACTTCTGCC GCAGATTGAG CTGCCATGAA GATGTTCTTG TTGTTTGGCA	540
AGAAGATGAT GTTACGGGCA TTAACCTGTT CAACAGCCTT GATAAAGTCT TCTGTTGAAG	600
GGTTCATGGT TTGACCGCCT TCGATAACAT AATCCACGCC TTGAGAACAG AAGATATCTG	660

733

CTAGACCTTT ACCAGCCACC ACAGCAATCA AAGCATACTC TTTTCTTCA GCCGACTTGA	720
TAACCTGAGT AGCTTCTTTC TCAACCTGTG CTTGCTGTTG GTTACGCATA TTGTCAACTT	780
TTACCTTGAC CAAGCTACCA TATTTGAGAC CTTCTTGCAT AACAAAGTCCT GGATCTTCTG	840
TATGAACATG GACTTTGACA ATTTTCATCAT CGTTAACAAC AAGGAGAGAA TCTCCAAGCT	900
CATCCAAGTA GTTACGGAAT TCATCGTAGT CAAAATCTTT AGCATAGGTT GGACCTTGCT	960
TAAGAGCTAC CATGATTTCA GTACAGTAAC CAAACGTGAT GTCCTCAGTC GCTACGTGAC	1020
CAGCTACAGA CTTATGATGC TCTACATTGA TCATCTCACT CATGTTGGCA GGAGTCGCTA	1080
CAAAGTCCTC AGATGCAATA TATTCGCCAG TAAGGGCTGA AAGGAAACCT TCGTAGATGA	1140
AGACCAATCC TTGACCACCT GAGTCCACAA CGCCAACTTC TTTCAATACT GGAAGCATGT	1200
CTGGTGT TTT AGCTAGAGCT GTTTTAGCAC CTTCCAAGGC TGC GCGCATG ACTTCAACAG	1260
CGTCATCTGT TTGCTCAGCT TTTTCTTAG CACCGATAGC AGCTCCACGA GAAACTGTTA	1320
AAATCGTTCC TTCAACAGGT TTCATCACTG CCTTATAGGC AACTTCCACA CCTGATTGGA	1380
AGGCCAGAGC CAAGTCTTGA CCTGTAACT CGTCTTATC CTTGATAGCT TGGGAAAATC	1440
CACGGAAG CTGAGACGTA ATCACTCCTG AGTTCACG CGCACCCATC AAAAGCCCTT	1500
TGGCAAGAAT GCTCGCTACT TCTCCAACG TAGAAGCTGG CTTGTCTGCA ACTTCTTAG	1560
CACCATTTTC AATGGTCATT CCCATATTTG TCCCAGTATC TCCATCTGGA ACTGGAAGA	1620
CGTTTAATGA ATTGACATAT TCAGCTTGCT TATTCAGCG AGTTGATGCA GCCTGCACCA	1680
TTTCTTGAAA TAAGCTAGTA GTAATTTT ACACGGTTAT TCTCCTACAA CTTTGATATT	1740
TTGAATGTAG ACATTTACAG TCTGAGCAGT AATTCCAAGC TGGTTTTCCA AGCTAAAGGC	1800
AACACGCTCT TGAATGTTTT TTGACACTTC ACTAATCTTT GTTCCGTAGC TTAACACGGT	1860
ATATACATCA ACTGCAATAC TGCCATCTTC GGCTGCCTTT ACGACGACAC CTTTAGAATA	1920
ATTTTCCTTA CCTAGCAGGG CTTGGAAATT ATCTTTGAGG GCATTTTAC TAGCCATACC	1980
GACCACACCA GAAATCTCAG TTGC	2004

(2) INFORMATION FOR SEQ ID NO: 96:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11915 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

734

CCGGGTTGGG CTGTTGCGCC ATTAAGCGG CACCACAGCT GGGTTCAGAA CGTCGTGAGA	60
CAGTTCGGTC CCTATCCGTC GCGGGCGTAG GAAATTTGAG AGGATCTGCT CCTAGTACGA	120
GAGGACCAGA GTGGACTTAC CGCTGGTGTA CCAGTTGTCT TGCCAAAGGC ATCGCTGGGT	180
AGCTATGTAG GGAAGGGATA AACGCTGAAA GCATCTAAGT GTGAAACCA CCTCAAGATG	240
AGATTTCCCA TGATTATATA TCAGTAAGAG CCCTGAGAGA TGATCAGGTA GATAGGTTAG	300
AAGTGAAGT GTGGCGACAC ATGTAGCGGA CTAATACTAA TAGCTCGAGG ACTTATCCAA	360
AGTAACTGAG AATATGAAAG CGAACGGTTT TCTTAAATTG AATAGATATT CAATTTTGAG	420
TAGGTATTAC TCAGAGTTAA GTGACGATAG CCTAGGAGAT ACACCTGTAC CCATGCCGAA	480
CACAGAAGTT AAGCCCTAGA ACGCCGGAAG TAGTTGGGGG TTGCCCCCTG TGAGATAGGG	540
AAGTCGCTTA GCTCTAGGGA GTTTAGCTCA GCTGGGAGAG CATCTGCCTT ACAAGCAGAG	600
GGTCAGCGGT TCGATCCCGT TAACTCCCAT TTTAGCGGGT GTAGTTTAGT GGTAAACTA	660
CAGCCTTCCA AGCTGTTGTC GCGAGTTCGA TTCTCGTCAC CCGCTTTGAA CTTTGTCTTT	720
TGTACCAAGT TTTTGACTTG GCGCGTAGC TCAGGTGGTT AGAGCGCACG CCTGATAAGC	780
GTGAGGTCGG TGGTTCGAGT CCACTCGTGC CCATAGTGT TAGTCCATTA CTAGGGGATT	840
GGAATATTAT CTGTTCACTA AGAGGACACG GGCTTGTTCC CGTATAAACT ATTTTGAGG	900
ATTACCCAAG TCCGGCTGAA GGAACGGTC TTGAAAACCG TCAGGCGTGT AAAAGCGTGC	960
GTGGGTTGCA ATCCACATC CTCCTTTTAT ATTAACGCGG GATGGAGCAG CTCGGTAGCT	1020
CGTCGGGCTC ATAACCGAA GGTGCTAGGT TCAAATCCTG CTCCCGCAAT AAGGCTCGGT	1080
AGCTCAGTTG GTAGAGCAAT GGATTGAAGC TCCATGTGTC GGCGGTTGTA TTCCGTCTCG	1140
CGCCATTAT ATATTTGGA AGGCTAGCGA AGAGGCTAAA CGCGGCGGAC TGTAATCCG	1200
CTCCTTCGGG TTCGGGGGTT CGAATCCCTC CCCTTCCATT TTACGGGCAT AGTTTAAAGG	1260
TAGAACTAAG GTCTCCAAAA CCTTCAGTGT GGGTTCAATT CCTACTGCCC GTGTAAATAG	1320
AATTATGGCG GGTGTGGTGA AGTGGTTAAC ACACCAGATT GTGGCTCTGG CATGCGTGGG	1380
TTGATCCCC ATCACTCGCC TATTTTATAT TGGGGTATAG CCAAGCGGTA AGGCAAGGGA	1440
CTTTGACTCC CTCATGCGTT GGTTCGAATC CAGCTACCCC AGTTACTATT TGCCGGCGTG	1500
GCGGAATTGG CAGACGCGCT GGACTCAAAA TCCAGTGTCC GCAAGGACGT GCCGGTTCGA	1560
CCCCGGCCGC CGGTATAGTA TAGTGTTAGG AACGTTGTTA TTCTTCGTTT CTTTTTATA	1620
TTATTTTGG TATAATTATA GTTATTCAAA TTTTATTTAG ATTAAGAAAG TGTAGGGGAG	1680
TATGTCTGT TCTATCGATT TATTAAACA TCGGTATTTG AAAAATATTA AAGAAAATCC	1740
TGAATTGTTT GTCGAATTG AGTTGGAGTA TCCTGTTGCA AGTTTAGAAG GGGATGCTAC	1800

735

AGATGTTGAA GTTATGAAGG ATCTATTTCA TTATTTAGTT TCTACTTTGG ATCTCACCGT	1860
AGCAAAGGTA GATGATTTTG GCAATCTGAT CCAGTTAGTA GATCCGATAA GTCAGGATGC	1920
TATTTTATTT GAAGTTTCCT ATACAACGAT TGAGTTTGCA TTTGGTAAGG CTGAAACGAT	1980
TCAAGAGGTC GAAAATCGTT TCAATAATTA TATGAATGTA ATTCAGAGAA AGTTAGCTGA	2040
ATCAAATCAT GCTATGTTG GCTGTGGTAT CCATCCCAAC TGGGATAAAA ATGAGAATTG	2100
TCCAGTGGCT TATCCACGCT ATCAGATGTT GATGGATTAT TTGAATTTGA GTAGAAATAT	2160
TATTAAATCA GATTTACATC ATTTCCCTGA ATATGGTACT TTTATCTGTG GGAGCCAGGT	2220
TCAGCTGGAT ATTTCAAAAA CCAACTACTT ACGGGTGATT AATGCTTTTA CTCAAATTGA	2280
AGCGGCTAAG GCTTATTTAT TTGCAAACTC TGAATTTTCG GGTGCGGATT GGGATACGAA	2340
AATTTCAAGG GATATTTTCT GGGAAGAATC TATGCATGGT ATCTATCCAG AGAATGTTGG	2400
GGTCAATGCT AGACTCCTTA ATGATGAAAC TGATTTTTTT GACTATCTAA ATCATTCTGC	2460
GATTTTTACT GCGGAACGTG ATGGGCAGAC CTATTATTTT TATCCTATTC AGGCTGGGGA	2520
CTATTTGGCT ACGTCCGAAA TCCAAGCATT TGCTCTGAAT GGGGATGAGG TTATTATTTA	2580
CCCCAAGAG AAGGATTTTG AAATCATCG TAGTTACCAG TACCAAGATT TAACGACTCG	2640
AGGAACAGTT GAGTTTCGTA GTGTGTGTAC ACAGCCACTT GATAGGACTT TTGCTTCTGC	2700
AGCTTTTCAC TTGGGATTAT TGGTTAATTT AGACAAGTTA GAAGCTTACT TAGAAACAGC	2760
ACCTTTCTTT AAAGTATTTG GTTATGATTA CAACTCTTTA AGGAGACAAT TTTCTAAGAA	2820
AAATCTTACA GATGAGGAAG AAATACGAT TATTGAATTT TCCAAAGACT TACTCCTACT	2880
AGCTGAGGAG GGACTAGTGG TGAGAAATAA GGAAGAAATG ACCTATTTAC AGCCTTTGAG	2940
AGAAGAATTG AGCCTATAAT TTCTCTTATA AAGGGAGAAT TTTCTGAAAA ATCATGATAT	3000
AATGGACGAG ACTATAGATA AAGGATAGAG AGTAATGACA TTAGTTTATC AATCAACGCG	3060
TGATGCCAAC AATACAGTAA CTGCCAGCCA AGCAATTTTG CAAGGTTTGG CGACGGACGG	3120
CGGTTTGT TT ACACCGGATA CTTATCCAAA GGTAGATTTG AACTTTGACA AATTGAAAGA	3180
TGCTTCTTAC CAGGAAGTTG CTAAGCTAGT TTTGTCAGCA TTTTATAGATG ACTTTACAGT	3240
TGAGGAGTTG GACTACTGTA TCAACAATGC CTACGATAGC AAATTTGATA CTCCAGCTAT	3300
TGCACCATTA GTGAAATTAG ATGGGCAATA CAATTTGGAA CTTTCCATG GTTCAACGAT	3360
TGCCTTTAAG GATATGGCCT TGTCTATTTT GCCATACTTT ATGACGACTG CTGCTAAGAA	3420
ACATGGTTTG GAGAACAAGA TTGTTATCTT GACAGCGACA TCTGGTGACA CGGGGAAAGC	3480
TGCTATGGCG GGGTTTGC GA ATGTGCCTGG TACTGAGATT ATCGTCTTTT ATCCAAAGGA	3540

736

TGGTGTGAGC AAGATTCAAG AGTTACAAAT GACCACTCAG ACTGGCGACA ATACTCATGT	3600
TATTGCTATT GATGGTAACT TTGACGATGC GCAAACAAAT GTGAAGCACA TGTTTAACGA	3660
CGTGGCTCTT CGTGAAAAAT TGACTACCAA CAAGTTGCAA TTTTCATCAG CTAACCTAT	3720
GAACATTGGT CGTCTGGTGC CACAAATTGT TTATTATGTT TATGCTTACG CTCAATTGGT	3780
TAAGACTGGT GAAATTGTAG CTGGTGAAAA GGTAACTTC ACAGTACCAA CAGGAACTT	3840
TGGAAATATC TTGGCTGCCT TTTATGCCAA ACAAATTGGT TTGCCAGTTG GTAAATTAAT	3900
CTGTGCTTCA AATGACAACA ATGTTTGAC AGACTTCTTT AAAACACGTG TCTATGACAA	3960
AAAACGTGAG TTAAAGGTAA CAACCAGCCC ATCTATGGAT ATCTTGGTAT CTTCAACTT	4020
GGAGCGCTTG ATTTTCCATC TTTTGGGAAA TAATGCTGAA AAGACAACGT AACTTATGAA	4080
TGCCTTGAAC ACGCAAGGAC AATATAAGTT GACAGACTTT GATGCAGAGA TTTTGGACCT	4140
CTTTGCAGCT GAATATGCGA CTGAGGAAGA AACGGCAGCA GAGATCAAGC GTGTTTGTGA	4200
GTTAGATTCT TATATCGAGG ACCCTCATAC AGCTGTTGCT TCAGCAGTTT ATAAAAATA	4260
CCAATCGGCC ACTGGAGATG TAACTAAGAC AGTGATTGCT TCAACAGCTA GTCCATACAA	4320
GTTCCAGTA GTTGCACTAG AAGCTGTAAC TGGAAAAGCA GGTTTAACAG ACTTTGAAGC	4380
CTTGGCTCAA TTACATGAAA TCTCAGGCGT TGCAGTGCCA CCAGCAGTTG ATGGGCTTGA	4440
AATAGCTCCA ATTCGTCACA AGACAACAGT GGCAGCTGCT GACATGCAAG CAGCGGTTGA	4500
GGCTTATTTA GGACTTTAAG ACAGAGGGAG CAAACTCGGT TGGGAAACCA ACTGAGTTTC	4560
TTTTCATCAG GAGGAGAGAT TGTTTAAGAA AAATAAAGAC ATTCTTAATA TTGCATTGCC	4620
AGCTATGGGT GAAAACTTT TGCAGATGCT AATGGGAATG GTGGACAGTT ATTTGGTTGC	4680
TCATTTAGGA TTGATAGCTA TTTCAGGGGT TTCAGTAGCT GGTAATATTA TCACCATTTA	4740
TCAGGCGATT TTCATCGCTC TGGGAGCTGC TATTTCCAGT GTTATTTCAA AAAGCATAGG	4800
GCAGAAAGAC CAGTCGAAGT TGGCCTATCA TGTGACTGAG GCGTTGAAGA TTACCTTACT	4860
ATTAAGTTTC CTTTtaggat TTTTGTCCAT CTTGCTGGG AAAGAGATGA TAGGACTTTT	4920
GGGGACGGAG AGGGATGTAG CTGAGAGTGG TGGACTGTAT CTATCTTTGG TAGGCGGATC	4980
GATTGTCTC TTAGGTTTAA TGACTAGTCT AGGAGCCTTG ATTCGTGCAA CGCATAATCC	5040
ACGTCTGCCT CTCTATGTTA GTTTTTTATC CAATGCCTTG AATATTCTTT TTTCAAGTCT	5100
AGCTATTTTT GTTCTGGATA TGGGGATAGC TGGTGTGCT TGGGGACAA TTGTGTCTCG	5160
TTTGGTTGGT CTTGTGATTT TGTGGTCACA ATTAAAACTG CCTTATGGGA AGCCAACTTT	5220
TGGTTTAGAT AAGGAACTGT TGACCTTGGC TTTACCAGCA GCTGGAGAGC GACTTATGAT	5280
GAGGGCTGGA GATGTAGTGA TCATTGCCCTT GGTGCTTTCT TTTGGGACGG AGGCAGTTGC	5340

737

TGGGAATGCA ATCGGAGAAG TCTTGACCCA GTTTAACTAT ATGCCTGCCT TTGGCGTCGC	5400
TACGGCAACG GTCATGCTGT TGGCCCGAGC AGTTGGAGAG GATGATTGGA AAAGAGTTGC	5460
TAGTTTGAGT AAACAAACCT TTTGGCTTTC TCTGTTCCCTC ATGTTGCCCC TGTCTTTAG	5520
TATATATGTC TTGGGTGTAC CATTAACCTA TCTCTATACG ACTGATTCTC TAGCGGTGGA	5580
GGCTAGTGTT CTAGTGACAC TGTTTTCACT ACTTGGGACC CCTATGACGA CAGGAACAGT	5640
CATCTATACG GCAGTCTGGC AGGGATTAGG AAATGCACGC CTCCCTTTTT ATGCGACAAG	5700
TATAGGAATG TGGTGTATCC GCATTGGGAC AGGATATCTG ATGGGGATTG TGCTTGGTTG	5760
GGGCTTGCCT GGTATTTGGG CAGGGTCTCT CTTGGATAAT GGTTTTCGCT GGTATTTTCT	5820
ACGCTATCGT TACCAGCGCT ATATGAGCTT GAAAGGATAG GAAATGCAAA AAACAGCTTT	5880
TATTTGGGAT TTAGACGGGA CTTTATTTGA CTCTTACGAA GCGATTTTAT CAGGGATTGA	5940
GGAGACTTTT GCTCAGTTT CTATTCCTTA TGATAAGGAG AAGGTGAGAG AGTTTATCTT	6000
CAAGTATTCG GTGCAAGATT TGCTTGTGCG GGTGGCAGAA GATAGAAATC TGGATGTTGA	6060
GGTGCTAAAT CAGGTGCGTG CCCAGAGTCT GGCTGAGAAG AATGCTCAGG TAGTTTTGAT	6120
GCCAGGTGCG CGTGAGGTGC TAGCTTGGGC AGACGAATCA GGAATTCAGC AGTTTATATA	6180
TACTCATAAG GGAACAACG CTTTACCCT TCTCAAGGAC TTGGGGGTGG AATCCTATTT	6240
TACAGAGATT TTAACCAGTC AGAGTGGCTT TGTGCGGAG CCAAGTCCAG AAGCGGTAC	6300
CTATCTGCTA GATAAGTATC AGTTGAATTC TGATAATACT TATTATATAG GGGATCGGAC	6360
TCTGGATGTG GAATTTGCCC AGAATAGTGG GATTCAAAGC ATCAACTTTT TAGAGTCTAC	6420
TTATGAAGGG AATCACAGGA TTCAAGCGTT AGCAGATATT TCCCGTATTT TTGAGACTAA	6480
GTGATAAAAA GATTGTGTCA GTTTTGTGAC AGAGACCTAA CAACTATTT CAAGTAACCT	6540
AGTTTGTAC AAGGAATAGA CAGTTCTGTT AAATAGGCC GAGAGGGCTT TTTTCTACA	6600
TTTTTTGTGT TATGATAGAC AGGTACTCAT TTGAAAGGAA TTTGAAAGAA TGAAGAAAAG	6660
AATGTTATTA GCGTCAACAG TAGCCTTGTC ATTTGCCCA GTATTGGCAA CTCAAGCAGA	6720
AGAAGTTCTT TGGACTGCAC GTAGTGTGA GCAAATCCAA AACGATTGA CTAACCGGA	6780
CAACAAAACA AGTTATACCG TACAGTATGG TGATACTTTG AGCACCATTG CAGAAGCCTT	6840
GGGTGTAGAT GTCACAGTGC TTGCGAATCT GAACAAAATC ACTAATATGG ACTTGATTTT	6900
CCCAGAACT GTTTTGACAA CGACTGTCAA TGAAGCAGAA GAAGTAACAG AAGTTGAAAT	6960
CCAAACACCT CAAGCAGACT CTAGTGAAGA AGTGACAACT GCGACAGCAG ATTTGACCAC	7020
TAATCAAGTG ACCGTTGATG ATCAAACGT TCAGGTTGCA GACCTTTCTC AACCAATTGC	7080

738

AGAAGTTACA AAGACAGTGA TTGCTTCTGA AGAAGTGGCA CCATCTACGG GCACTTCTGT	7140
CCCAGAGGAG CAAACGACCG AAACAACTCG CCCAGTTGAA GAAGCAATC CTCAGGAAAC	7200
GACTCCAGCT GAGAAGCAGG AAACACAAGC AAGCCCTCAA GCTGCATCAG CAGTGGAAAT	7260
AACTACAACA AGTTCAGAAG CAAAAGAAGT AGCATCATCA AATGGAGCTA CAGCAGCAGT	7320
TTCTACTTAT CAACCAGAAG AGACGAAAAT AATTTCAACA ACTTACGAGG CTCCAGCTGC	7380
GCCCGATTAT GCTGGACTTG CAGTAGCAAA ATCTGAAAAT GCAGGTCTTC AACCACAAAC	7440
AGCTGCCTTT AAAGAAGAAA TTGCTAACTT GTTTGGCATT ACATCCTTTA GTGGTTATCG	7500
TCCAGGAGAC AGTGGAGATC ACGGAAAAGG TTTGGCTATC GACTTTATGG TACCAGAACG	7560
TTCAGAATTA GGGGATAAGA TTGCGGAATA TGCTATTCAA AATATGGCCA GCCGTGGCAT	7620
TAGTTACATC ATCTGGAAAC AACGTTTCTA TGCTCCATTC GATAGCAAAT ATGGGCCAGC	7680
TAACACTTGG AACCCAATGC CAGACCGTGG TAGTGTGACA GAAAATCACT ATGATCACGT	7740
TCACGTTTCA ATGAATGGAT AAACCCGACT TGATAACATC ATTTTGACGA ATGAGATCTA	7800
GCTTTCGTGA TGGAAAGCGA TTCTCGTTCG TTTTTCCTTT GTCATACTCT TCGAAAATCT	7860
CTTCAAACCA CGTCAGTTTT ATCTGAACT TCAAAGCTGT GCTTTGAGCA ACCTGCGACT	7920
AGCTTCCTAG TTGCTTTTTT GATTTTCATT GAGTATCAAT TTGAATGGAA AATGGAAAGT	7980
TATCATCTTG TAATGAGTTA AGCAACATTC TTGCAATCTA TTTTACTTTA TATCACAATT	8040
AATTAGTCAA ATATTGATAA ATCAATAAAA AGAGAGGGGA AGAAATGCTA GAGATTCAAG	8100
ATTTACTGTA TCAACTCCGC TTGCTGAGC AAGCGAGTAC GCAATTGTTT GAAAAAGGC	8160
TTGGGATTAG TTTGACACGG TATCAGATTT TACTGTTTTT GCTGGAGCAT TCTCCTTGTA	8220
ACCAAATGGC GGTTCAGGAG CGTTTGAAAA TTGATCAGGC TGCTTTGACA CGGCATTTCA	8280
AAATTTTGGA AACGGAAGGT TTGGTGGAGC GTCATCGTAA TCCTGAAAAT CAGCGGGAAG	8340
TGTTGGTAGA GGCTGCGAAG TATGCCAAGG AGCAGTTAGT GGTGAATCCC CCTCTGCAAC	8400
ATATCAGGGT TAAGGAAGAG ATAGAAAGTA TCTTAACAGA GTTTGAGAGA ACAGAACTCA	8460
GCCGTTTATT AAATAAATTG GTTTGGGTA TTGAAAATAT AGAAATTTAA GGAGAAATAG	8520
ATGTCAATTA TTTTAACAAC GATCGTTGCT TTGGAGCATT TTTACATTTT TTATTTGGAA	8580
AGTATTGCCA CGCAATCAGA TGCGACTAGT CGTGTATTTA ATATGGAAAA GGAAGAATTG	8640
GCTCATCCGT CAGTAAGTTC ATTGTTCAAA AATCAAGGAA TTTATAAGGC TCTGCTAGGA	8700
GTCTTCTCT TGTATGTCAT TTATTTCTCA CAGAAATTAG AAATTGTGAC TATTTTGTG	8760
TTATTTGTGA TTGGTGCTGC GACTTACGGC TCTTTAACAG CGGATAAAAA AATTATTTTG	8820
AAACAAGGTG GATCAGCTAT TTTGGCCTTG ATTAGTATTT TACTCTTTAA ATACACTTGA	8880

AGGTCGATTC TAATCTCGCT AATCCTTTT AATCCAGAAT AAGGGAAATA TGTTATACTT	8940
GTTTTTAAGA AAAAAGTCTC ATTGAATTGG TTTTGAGGAG TTAGAAATGA AAGTATTAGT	9000
GACAGGTTTT GAGCCCTTTG GAGGGGAAAA GGGCAATCCA GCTTTGGAGG CCATTAAAGG	9060
TTTACCAGCT GAAATCCATG GTGCTGAGGT CCGTTGGCTA GAGGTGCCGA CAGTTTTTCA	9120
CAATCTGCT CAAGTATTGG AAGAAGAGAT GAATCGTTAT CAACCTGACT TTGTCTTTG	9180
TATTGGGCAA GCTGGTGAA GAACTAGTTT GACACCTGAA CGAGTGACCA TTAATCAAGA	9240
CGATGCATGC ATTTCTGATA ACGAAGATAA TCAACCGATT GACCGTCCCA TTCGCCCAGA	9300
TGGTGCTTCG GCCTACTTTA GTAGTTTGCC GATTAAAGCG ATGGTCAAG CTATAAAAAA	9360
AGAGGGCTTA CCGGCCTCTG TTTCCAATAC GGCAGGGACT TTTGTCTGCA GCCATTTGAT	9420
GTATCAGGCT CTCTATTTGG TAGAAAAGAA ATCTCCATAT GTTAAGGCAG GTTTTATGCA	9480
TATTCCTTAT ATGATGGAAC AGGTGGTGAA CAGACCGACT ACTCCAGCTA TGAGTTTAGT	9540
GGATATTCGG CGAGGGATAG AAGCAGCAAT CGGCGCTATA ATAGAACATG GAGATCAGGA	9600
ACTCAAGTTG GTAGGCGGAG AAATCATTG ATAGAAAAA GCTTGAGGGG AAAAACCTTC	9660
AAGCTTTTGG ACGTTTTTCGG GCCAATACTG CTCGGTAAAA CATAATTTTA GTGCATTGGA	9720
TATAAGGTAG GAGTGAAAAA CTAGCAATGC CAAAGGTAAT CCAATTGAGG AAGTACCAAG	9780
GAAGAAGCTG TAAATCTAGG ACAAAGTGCT GGAAGTTGTA GCCCTTCATA AAGGAACGGC	9840
TAGTTTTTAG GATTCGTCTT GGTGGGACCT GTCCTAGGTC TAGACTATAA CAGAGAAGAA	9900
ATTCACCTG TGAATAGGCA TAATACTGTG GAATATAGAG GATATTTCTT ACAATGATCA	9960
AGATGAGACT TGCAAGAAAG TAGAGTCCAA AGACCATGAG GAAACGCTCG GTTTCAACTG	10020
ATGAGAGATC TAGATTTGGA AACTCAGGAT GTAGGGTGAC GAATTTTTTG GCTAAAAAGC	10080
TACTATAAAA GAGGAGGTAA ATCCCAAGTA AATTAGGGAT ACTCCATAAA AAGAGATAGA	10140
AACGTTTGAG AAGTAGGGTC AAAAAGGTTT GAGAAAAGCG CTCCTCATCA AAGAGAGCTA	10200
GGCTGTTTTT TACAGATGGC TCCGTTTTAG AATCTTTCAT GAGTGTCAGT GTTGATAGA	10260
CGGAACTGGT CAAAAGAATA GTCCCGATAA AGGAGACTAG TAGAGGAAAG AGGTAGGTTT	10320
GAAGTATTG GCCAAGTATG CTGAAAAATG GCTGTTCTAA AACAGTCCCG TGGATCCGAG	10380
ATAAGGGATT AAGAAAACCA GATAAGATGA CCAGCATACT GGGAAGGATA TAGAGGAGAA	10440
AGAGACGGGG GGTGTCAGCC TGAAAATGTT TTGACTCCTG ACGAATTGTT TTTAAATCAA	10500
TTTTTGATA GTTCATTCTC TTATTATACC ATAGTTCTTA TACATAGTTC GTGACAGTTC	10560
CTACTTTTTT TGATAAAATC ATACAGTGTG TCCTTGGGCA CACTGTATGA ACTGGGACTG	10620

740

TCTTTCCCAG CTTCCGAGGT AAAAAATGTC AGATTACCA ATCAAATATC GTTTGATTAA	10680
GAAAGAAAA CACACAGGAG CTCGTCTGGG AGAAATCATC ACTCCCCACG GTACCTTTCC	10740
GACACCTATG TTTATGCCAG TTGGGACACA AGCCACTGTC AAAACTCAGT CACCTGAAGA	10800
ATTGAAGGAG ATGGGTTCGG GAATTATCCT ATCAAACACC TATCATCTCT GGCTTCGCCC	10860
TGGAGATGAA CTCATTGCAC GCGCTGGTGG TCTCCACAAG TTCATGAATT GGGACCAGCC	10920
TATCTTGACA GATAGTGGTG GTTTTCAGGT TTATTCTTTA GCAGATAGCC GTAATATCAC	10980
AGAAGAAGGA GTAACCTTTA AAAATCATCT AAATGGTTCT AAGATGTTCC TATCCCCAGA	11040
AAAAGCCATC TCTATTGAGA ATAATCTGGG TTCAGACATC ATGATGTCCT TTGATGAATG	11100
TCCTCAGTTT TATCAACCTT ATGACTACGT TAAGAAATCG ATCGAGCGTA CCAGCCGTTG	11160
GGCTGAGCGT GGTTTGAAGG CTCACCGTCG TCCACATGAC CAAGGTTTGT TTGGAATTGT	11220
GCAAGGTGCA GGATTTGAAG ACCTTCGCCC CCAATCAGCT CATGATCTTG TCAGCATGGA	11280
TTTCTCAGGC TACTCTATCG GTGGTTTGGC AGTGGGAGAA ACCCATGAAG AGATGAATGC	11340
GGTCTTGAC TTTACAACCT AACTGCTGCC TGAATAAAA CCTCGTTATC TGATGGGTGT	11400
GGGAGCGCCA GATAGCTTGA TCGATGGGGT CATTCGTGGG GTGGATATGT TTGACTGTGT	11460
CTTACCGACT CGAATTGCTC GTAACGGGAC TTGTATGACC AGTCAAGGAC GTTTGGTTGT	11520
GAAAAATGCC CAGTTTGCTG AGGACTTTAC GCCACTGGAT CCTGAGTGTG ATTGCTACAC	11580
ATGTAATAAC TATACACGCG CTTACCTTCG TCACCTGCTC AAGGCTGATG AAACCTTTGG	11640
TATCCGCTTG ACTAGCTACC ACAATCTTTA CTTCTTGCTT AACCTGATGA AGCAAGTGCG	11700
ACAAGCCATC ATGGATGACA ATCTCTTGA ATTCCGTGAG TATTTTGTGG AAAAATATGG	11760
CTATAATAAG TCAGGACGTA ATTTCTAAAA TGGAATTGAT ATAAAAAAT CCTAAGTTT	11820
CTCTTAGGAT TTTTCTTCTT TTTTGTAGAT AATAAAGTGT ACAATGAAAG GAAGAATAAA	11880
CTCGTATGCG CATTAAATGG TTTTCCTCGA TTAGG	11915

(2) INFORMATION FOR SEQ ID NO: 97:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9069 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

GAGAGGGCAA CAGTTCTATC GCTTCAAATT TTTTCTGGT TTGCAGATAT TCAAGAATCG	60
GGAGTTTTTC TATAGTATTC GGCAGATTTA TTACAGCCAA GCATCTCAA AATACGGACA	120

741

GCATCCTCCA TCTTTTCTG GCCTTCCTTG ACTCTACCTT GCTTGCTATC AAGGAGACCT	180
TCTGCCACA GATAACAAT TCGGAAATAG GTCTCATTTC CTTGTAGAA ATGCTCTTCG	240
ATAACACGTT TAAATAATA GGCATTGGTA AATTCTTCAC ACTCAATACT AGCTAAAAAG	300
CCATTCAATA GTATAGTATG AAAAAGGTTT CGATTGCCAG ACATTTCAT TAGAAAATCA	360
GATTTACGTA CCATTTCTCG TACATATCTA GTAAAAAGAG AAACAGATAA AAATGGAGAA	420
CTGACTGAAA ATAAATTGAG TTCATAGATT CCCAGATCT CGGTAGAAAA CAAATAATCA	480
TGAAGGACTT TTCCTTCCTC TGCTGTTAAG TCTACCCTTT CATCTATGCT CTTCATATAA	540
GACTTGATAA TAATGGCATT TAGAATATGT TTCTGTTTGT TGTGAGAATG GGCATGCTTT	600
TATACTCCCT GCGATATAAG TCCTCAAGAG GTGCTATATT CTTTGGTTCC AAGACATCTG	660
TAATTTCTTT TCTCAACTCA GAATCTGTAT CATACTGGAA ACCTCTTGCC AGAAAGAGGA	720
TCTCCTCCAC ACTGGCAGAT ATATTTTCCA GAGCAAATAG AAATTTTCC ACCGAAAGCT	780
CACTCTGACC TGTTCAAAA CGGGACAACA TAGACGGCGA AAATTGTCCT CCGGTTGCTT	840
GTCTCAGTGA GATATTTCTT GACTCTCGTA ATTGTCTAAA GACTTTTCCA ATCTGCTCCA	900
TAGACTTCCC CTTGATTCCG TATTTTCTTC ATTTTATCAT ATTTTTCAGA AAATTCATCA	960
AAACTTGCC AAATTGTCAG AATTATGAGA AAATAGAGGA TATTTATCAC GTGGAGGGAC	1020
TGCTATGAGA GACGATATCA AAATCAATGA CCGTGCTTTG GCCTTGCAAG ACCAAATTAT	1080
CGAAAACTA GAGAAAGTTT TTGATACAGA TGTGGAATTG GATGTTTACA ATCTAGGTCT	1140
GATTTATGAA ATCAATCTGG ATGAAACGGG GCTCTGCAAG ATTGTCATGA CCTTACCGA	1200
TACTGCCTGT GATTGCGCCG AAAGCCTGCC TATTGAAATC GTGGCAGGTC TGAAACAAAT	1260
CGAGGTATC AAAGATATCA AGGTTGAAGT TACCTGGTCG CCGCTTGGA AAATCACACG	1320
AATCAGTCGC TATGGCCGTA TTGCCCTTGG ACTACCACCT CGTTAAGCAG ACCAATCACT	1380
TTTAAAGATG AAAATCAAAG GGCAAACTAG AAAACTAGCC GCAGGTGCT CAAAACACTG	1440
TTTTGAAGTT ATGGATAGAA CTGACGAAGT CAGCTCAAAA CACTGTTTGT AGGTTGTGGA	1500
TAGAACTGAC GAAGTCAGCT CAAAACACTG TTTTGAGGTT GTGGATAGAA CTGACGAAGT	1560
CAGCCCAAAA CACTGTTTGT AGGTTGTGGA TAGAACTGAC GAAGTCAGTA ACCATACCTA	1620
CGGCAAGGCG ACGTTGACGT GATTGAAGA GATTTTCGAG TATGAGTTTA TTTTTCCT	1680
GACTTGTTCA TATTCAGAA GTCTGTCACG GCTCCGCGTG AAGCAGATGA TACGATGTGG	1740
GCATATTTAC CGAGGACACC ACGGCTGTAA AGTGGTGGCA AGGTTGTTTC TGCCTTGCGT	1800
TTTCAAGTT CTCTTCGGA TACGGCCATA GAAATTTCTT TGGTATCTTG GTCAACCGTA	1860

742

ACGATATCGC CGGTACGGAG ATAGGCAATT GGTCCACCAT CCTGAGCTTC AGGAGCGATA	1920
TGTCCAACAA CCAGACCATA AGTACCACCA GAGAAACGTC CGTCCGTCAA GAGGGCCACC	1980
TTATCTCCCT GACCTTTACC AACAAATCATT GAAGAAAGTG ATAGCATCTC AGGCATACCA	2040
GGACCACCTT TAGGTCCAAC AAAACGAACA ACGACTACAT CGCCATCAAC GATTTTCATCT	2100
GTCAGAACGG CCTGAATCGC ATCTTCTTCT GAGTCAAAGA CCTTAGCTGG CCCAACGTGA	2160
CGACGCACTT TAACACCTGA TACCTTGGCA ACTGCACCGT CAGGAGCAAG GTTCCCCTTC	2220
AAGATGATAA GCGGACCATC CGCACGTTT GATTTTCAA GTGGCATGAT AACTTTTGG	2280
CCTGGAGTCA AGTCTGCAA GTCAGCCAAG TTTTCAGCTA CAGTCTTACC AGTACATGTG	2340
ATGCGATCTC CGTGAAGGAA ACCATTTGCC AACAAATACT TCATAACCGC AGGGACACCA	2400
CCGACTTCGT AGAGGTCTTG GAAGACATAC TGACCAGATG GTTTCAAGTC GGCCAAGTGA	2460
GGCACACGTT CTTGAATCGT ATTGAAGTCC TCAAGTGACA AGTCAACATT TGCGGCATGG	2520
GCAATGGCGA GCAAGTGAAG AGTGGCGTT GTAGAACCAC CGAGAGCCAT CGTTACAGTG	2580
ATAGCATCTT CAAAGGCTTC ACGAGTCAAG ATATCTGATG GTTTGAGACC AAGTTCCAAC	2640
ATCTTAACAA CAGCACGTCC TGCTGCTTCG ATATCTTCTT TCTTATCAGC TGATTACAGT	2700
GGGTGAGAGG ATGACCCTGG CAAACTCATC CCTAGAACTT CGATAGCAGT TGCCATGGTA	2760
TTAGCAGTAT ACATACCACC ACAACCACCA GGGCCAGGGC AGGCATTACA TTCAAGACGT	2820
TTCAAGTCCT CAGCTGTCAT GTCACCGTGG TTCCATTTTC CGATACCTTC AAAGACAGAA	2880
ACCAAGTCGA TATCTTTACC ATCAAGATTT CCCGGTGCAA TAGTTCCACC ATAGGCGAAA	2940
ATAGCTGGGA TATCCATATT AGCAATAGCA ATCATAGATC CAGGCATGTT CTTGTACACAG	3000
CCACCGATAG CGACGAAGGC ATCCACGTTG TGACCACTCA TAGCCGCCTC GATGGAGTCC	3060
GCGATGATGT CACGAGATGT TAGAGAGAAA CGCATACCAG GCGTTCCCAT AGCGATCCCG	3120
TCCGCTACGG TAATGGTTCC AAAGTGTACA GGCCAAGCGC CTGCAGATTT GACACCTTCT	3180
TTAGCCAGTT TCCCGAAATC ATGCAAGTGA ATGTTACATG GTGTATTTTC CGCCCAAGTC	3240
GAAATCACTC CCACAATCGA TGTTTCAAAG TCCTTATCTG TCATACCAGT CGCACGAAGC	3300
ATAGCACGGT TAGGTGATTT AACCATGCTG TCATAAATGC TACTGCGGTG ACGTTTATCT	3360
AATTCAGTCA TCTTATCCCT CCCATTTCAG TTTTACTAT TATAGCACAA TTTTCGCATG	3420
AAGAACAGAA TAAATTCCTT GAATTTTCAG AAAATTCTAT ACACATGTGA AATATTTAAA	3480
ATTAATAACA ACAAGCGGA TTAGTGCACT TTCTGATGAC CAGAATATGC TTTTAAATCC	3540
GCTTTCTTTA AATAACGTAC TGTAATTTT ACAGAAATTC TTTCAAATAA GTGTATTTAA	3600
CATCTATCTT GCATTATAAA TTTCTAGAAC CTCTCTTTT ATATTCGATT CACTCAAACC	3660

743

ATACTCATTA AGAAGATAAT CCATTTTCCC TACTTGACCG AATCTTTCTT GAACACCCAT	3720
CCGATGAATT TTTGTTATTC CATCATCAGA GAATAATTCA CATAAAGCAC TGCCAATTCC	3780
ACCTATCTGA TTGTGGTTTT CTACAGTAAA TATAGTTTTT CCACTTAACA TTGTTTTTAT	3840
CTGTTCTGGT ATCGGTTTGA TTCTAAATAA ATCTATCACA CCTACTGAAT AACCTAATTT	3900
AGACAGTTCA TCTGCAACTC GAATACTTGG AGCAACCATT ATGCCAGAAG CAACGATTAC	3960
AAGATCTTCA CCATGCCTTA ACTCAATGTA GCCTTTAGAA AAATCTTCTC CACCTTGATA	4020
CACAGGAACT GGAGCTTTTC TAATTGTTTCG AATATATTTT AGTCCTTTTA AGTCTAATGT	4080
CTGGTTCAAT ATTTACAGAA ATTGGATATC ATCAGTTGCT TCGAAAATGA TTGATTTAGG	4140
AATTAAACGT AACAATCCAA TTTCTTCAAA TGGCATATGT GTTCCACCAT TCATCTCTGC	4200
CGTTACTCCT GCATCTGATC CAATCACAGT GGCATCCAAT TGTGCGTATC CAAGAGAAAT	4260
AAATAATTGA TCAAATACTC TTCGTGAAGC AAAAGGACCA AATGTATGAA GATAAGGTCT	4320
AAACCCCTGA ATAGACAAGC CTGCTGCAAG GCCGACCATT TCTGCTTCCA TAATCCCAAC	4380
ATTACATAA CGGTCTCCAA AGTCCTTTTC AAGATTATTA GTAGCCATCG AACTTGACAA	4440
ATCGGCTTCT AAGACTACTA TATCAGAATC ACTTTGATTA GCCTCTAAAA GGAAGTCTCT	4500
ATATACATGC CGTAATTCTT TCGTACTTCT CATCATTTCTG TTTCTCTCAA TTCCTGACTT	4560
AATCTTTCTA CAACTGAAGT TAACATTTGT TTCTCCTCTA CAGTAGGGCG AAGATGATGA	4620
TTGGATTTC ATTCTTCCAG CTCTTGAACC CCTTGACCTT TAATAGTATC TAATACAATG	4680
CACTTAGGTG ATGAATTATT TGACTGTTTT AATTGGACAA TCCCTTCATA AATTTCTCTA	4740
ATATCTGAAC CCTTGACCCT AATGGATTCA AATCCAAATG CTGAAAATTT TTCTACGAAA	4800
TCACCTGGAT TACAAATATC CTTTGTAATA CCATCTAATT GTTTTTTGTT ATCATCAACA	4860
AATACAATTA AGTTGGATAA CTGTTGATGA GAAGCAAACGT GTATAGCCTC CCAACATTGT	4920
CCCTCATTTA ACTCACCATC TCCAACAATA GCGTAAGTAT AAAAGGGACT CTTTCTTATT	4980
CTCTGACCAT ATGCAAGTCC AGTTGCAACA CTAATTCCTT GTCCTAAAGA GCCCGTTGTC	5040
ATATCTATGC CTGGCGTTAG ATTTCTATCA GGATGAGACG GTAATTGGT TCCATTTGTA	5100
TTTAAAGAAT ATAAGAATTC TTGTCAAAG AAACCATTCA AATAGAGTGT ACTGTATAGA	5160
GCTGGTCCTC CGTGACCTTT TGATAATATG AAATAATCTC TATCTCGTGC TGCAAATATT	5220
TCTGGAGTCA TTGGCATTAT TTCACCATAA AGCACCGCTA AAACCTCTAC GATAGACAGA	5280
CTTCCTCCGT AATGTCCGAA TCCAAGATGA TTCAATGTTT TAAGAGTATT TAATCGGATG	5340
TTAGTCGCAA ATTTTCTTAA CCCATCTTCT CTATTTTAC TTAAAAATCAT CCCTTATTCC	5400

744

TCCGTTGCAG ATGGCTTTT AATAAAGGAT ACTCCAAACA TAACTGCTAG AATAAGAACA	5460
AGACCAATCA CAATGCCTGC TTGTGAGCCA AATTGATTTA ACATTCTAA AATAATTCCT	5520
GATAGACCAA AATCTGCATC TGAGAAAGTT GATCCTTGA AACCAAGTCC TCCCAAACT	5580
GGCATTAAAA AGACTGGAAG AAAACTGATT AAAATACCTT GTAAAAATGC TCCAATAGTG	5640
GCTCCACGAA CACCACCAGA TGCATTCCCA ATGACACCTG CAGTCGCTCC ACAGAAGAAA	5700
TGAGGCACAA CACCTGGTAA GATAACAACC GTTCCTGAAG CAATCATAAT TACCATACTT	5760
ACTAAACCAC CAACAAACT AGAGATAAAT CCAATTAGAA CTGCATTGGG TGCATAAGTA	5820
TAAACAATCG GACAATCCAA AGCAGTTTT GAATTAGGTA CAAGACGCTC TGAAATACCT	5880
TTAAAGGCTG GAACAATTTC GCCCAAAATA AGGCGAACAC CTGCTAAAAT AACAAATACC	5940
CCTGCTGCAA ATTGACCTGC TAATTGTAAA GCATAAACTA GACCACTTGT ACCACTACTG	6000
ATTTCTTTTT CTATATATTC TGACCCTGCA AAGATAGCTA CAATAATGTA AATAACTGCC	6060
ATGGATAAAG TAATACTAAC AGTACTATCA CGTAAAAAG CTAAACTCTT TGGAAATTTA	6120
ATGTCCTCTG TTGATTTGA TTTGTCACCG ATAAGGCTAC CAGTAAAACC ACTCAACCAA	6180
TATCCCAAAG AACTGAAATG ACCTAAAGCT ACCTTGTCAT TTCCAGTTAA TTGAACCATA	6240
TATTTTGTGA CAAATGCTGG GGAAATACTC ATAATAATAC CGAGTGCTAA TCCTCCTAGT	6300
AAGATGAGAG GCAAGCTAGT AAAGCCAGCA ACTGATAAAA TGACCGCAAT CATACATGCC	6360
ATATATAGAG TGTGGTGCCC TGTAAAAAA ATATATTTAA ATCGAGTAAA ACGAGCGATT	6420
AAGATATTGA ACACCATGCC TGCAAACATA ATCATTGCAG TAGCTGAGCC ATATGTTGTT	6480
AAAGCTACAG CTACAATTGC TTCATTATTC GGCACAACGC CAGATAAATG AAAAGCATGC	6540
TCAAACATGG TACCAAATGG ATTTAAAGAA TTTGTACAA TTCCTGCACC ACCAGATACA	6600
ACTAAGAAAC CAACAAAGT CTTAATTCCA CCTTTAATAA TATCAGGTAA TTTCTTCTTC	6660
TGAAGAACTA ATCCTAAGAT TGCAATTAAA GCTACTAAAA TAGCTGGTGT ACTAACAATA	6720
TCCAATATGA ACTTCATCAT GACGCTAGCC TCCTATATAA GTCCTTTTTC TTCACAAAGT	6780
TTAGTAATTA ATTCTCGTAG TTCATCCATA TCAATAATAC TATTTAAGAT ACGAACATCT	6840
CCAAGATGAC TAGCTGAATC AGCTAGATCA CGACCAACAA TCCAAATATC AGCTGCATTT	6900
GGATCTGCTC CACCTAAATC ATAATGTTCA ACTTCTACAT CCGAAACATT CAAATCACTC	6960
AATACAGATT CAATATTCAT CTGTACCATA AACTTGAAC CTAATCCTGA ACCACAAGCT	7020
GTACCAATTT TTAACATTAT CTAATCCTCC TGTTTAATTA TCATTTTAAT GTCATCATAG	7080
TTTTTTGATG ATATTAAAGT TTGAACATGA TTTTATCTC TAAAAATTGT TGTAAATGT	7140
GACAAAGCCT TTAAATGACT CTCATTATCA ATGGCTGCAA TACAAATCAA CAATCTTACC	7200

745

TCTTGTCTG GATTATCCAA TAAATAAATC GGTTCCTCCA AAAC TAACAT TGACATTCCT	7260
ATTTCATTCA CACCTTCATC TGGCCGAGCG TGAGGAATTG CTA CTCCCTT CCCTAAATTA	7320
ATAAAAGGTC CAAACTCTTC TACTTTTGA ATCATTGCCT CAGGGTAGTT CTCAGTTATC	7380
TTATCTTGAT CCAAAGCGG TTTAGCTGCT AAACGAATCG CCTCCTCCA TCCTAATTTT	7440
TGCGAACTAA CTGATAGGT TTCTTTGGTA ATAAGTTGTT CTAGCACTGG TACAATTTCC	7500
TTTCTATCAT TTTTTTGGTA AAGATAATTC TTAAACGCCA ATCTTAATTC CAATTCTTGT	7560
GTAATAATTC CATATCTTTT GACAATATTC AGGATTGTT CAATCTCAA ATCTCCATAC	7620
TCTAAATTCG GAAAACTTTT TAACACTAGT TCTACTAGTT GTATTGCTTG CTCTTCAGTC	7680
ATCATAACCG AAAC TAGATA ATTTGGCTTT TCTGTCTCCA CCTTTATGGT AGAAAAAACC	7740
ATATCATAGT CACTACTAGC TTTCACCTGT AAATCATCAA TCTTTGAGGT TCCTATAAAC	7800
TCAATTTGAG GAAATAATGC TAATAGATTC TCTTTTAACA TCAATGAAGA ACTAACACCA	7860
TTAGGACAAA TGATTGCTGC TTTATACCAT TTTTGAGGCA AAGTATCTGC TTTCTTTAAA	7920
TAACCTCCGA AATGGATAAC AAAATATGCT GTTTCACTAT CAGGTATGGG ATTGTCAATA	7980
GCGTCCATCA AGGGCATCAA AGAATCTTTG ACTAATTCAA ATAAATCAGG ATAATGTTCT	8040
TTAACATGCA ATACATATTC ATTTGAACTA GGTAGGCCGA ACTTTAATCT ATAGTAAGCC	8100
GGTATAAGGT GGCGGCGAAG ATTTTCTCTC AATCCTTCCC TTTGTTTAAA ATGTAACAAA	8160
GAAATATCTT CCATTCTACT TATAATAGCC TCTGTTAATT GATTAAAGTA AACCGGAGCA	8220
ACATCTACTT CACCTTCAA GCAACTTGAT AATAAAACGG TGATATAGCG ATAATCATCC	8280
TCAGAAAACA CCGTATCTAT AATTCCCAA TCAACCACTG TATCCAATAA AATAGTGGTT	8340
ATATCTTGAA TAACAGGAGA TACTAATGTC TCTGAAAGAC ATACTCTTTC AACATCCCTT	8400
TGATACCTAC ACAGAATGAA TACTAAACCG AAAAGGTAAA CTTTTAATTG ATTAACAATA	8460
GGTACTAGCT GTAGCTTCTC ATAATAATCT TTAAC TACCT GATCAATCAA ATCATAAGTT	8520
AATGAATACC CCCA ACTGGA TAAAACATAA TCCAAACCCC AAATCCCTAT GGAGGATTCC	8580
AGCAACTCAC TAACCATTG AAAAGCTAAG CGGTGCTTAT TCCACTCTGA ACCGTGTAAA	8640
GTATAACCTT TTGCTCTACT GTACCCTAGC TCCAAATCAT TATCTAACAT AATCTTTCTT	8700
AATGATTGAA TATCAGATAA GGTGTATTC TTA CT TACTT TCAAAAAGTC TTGGTAATGA	8760
CTATTGATA TAAAATCTAA TCGGCAAAAA GTGTAAAGAT AGATTAAAGC TAAGCGAGTC	8820
GACTTTGGTA AAACCAATTC ATCCGACTTA ATAATATCTG TCAAAGACTG CTTCTGACGA	8880
TTTGATAAAC TATAGCGACC TTGCTTTTTA TCCAGCACTA TCCCTTTATT AGCTAGATAA	8940

746

GGCACTAAAT AATCTATTCC TTCTTTGACT TCCTTTATAG GTAAGCTCAC CTTAACAGAT	9000
AATTCATATA ACGATAGCTC ACAATGATCC ATCAAAGTCA TCAAAATAAC TAGTGCTCTA	9060
TAATCAAAC	9069

(2) INFORMATION FOR SEQ ID NO: 98:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8654 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 98:

CGAGACAACA AGATGAAGAA AAATTTGCCC TATCGTTTGT GGCGCTTGCA AGTGTAGCAC	60
TTCTTGCAGC CTGTGGAGAA GTGAAGTCTG GAGCAGTCAA CACTGCTGGT AACTCAGTAG	120
AGGAAAAGAC AATTAAATC GGGTTTAACT TTGAAGAATC AGGTTCTTTA GCTGCATACG	180
GAACAGCTGA AAAAAAGGT GCCCAATTGG CTGTTGATGA AATCAATGCC GCAGTGGTAT	240
CGATGGAAAA CAAATCGAAG TAGTCGATAA AGATAATAAG TCTGAAACAG CTGAGGCTGC	300
TTCACTTACA ACTAACCTTG TAACCCAATC TAAAGTATCA GCAGTCGTAG GACCTGCGAC	360
ATCTGGTGGC ACTGCAGCTG CGGTAGCGAA CGCTACAAA GCAGGTGTTC CATTGATCTC	420
ACCAAGTGCG ACTCAAGATG GATTGACTAA AGGTCAAGAT TACCTCTTTA TTGGAACCTT	480
CCAAGATAGC TTCCAAGGAA AAATTATCTC AAAGTATGTT TCTGAAAAAT TAAATGCTAA	540
GAAAGTTGTT CTTTACACTG ACAATGCCAG TGAATATGCT AAAGGGATTG CAAAATCTTT	600
CCGCGAGTCA TACAAGGGTG AAATCGTTGC AGATGAAACT TTCGTAGCAG GTGACACAGA	660
CTTCCAAGCA GCCCTTACAA AAATGAAAGG GAAAGACTTT GATGCTATCG TTGTTCCCTGG	720
TTACTATAAT GAGGCTGGTA AAATTGTAAA CCAAGCGCGT GGCATGGGAA TTGACAAACC	780
AATCGTTGGT GGTGATGGAT TCAACGGTGA GGAGTTTGTA CAACAAGCAA CTGCTGAAAA	840
AGCATCAAAC ATCTACTTTA TCTCAGGCTT CTCAACTACT GTAGAAGTTT CAGCTAAAGC	900
TAAAGCCTTC CTTGACGCTT ACCGTGCTAA GTACAATGAA GAGCCTTCAA CATTTGCAGC	960
CTTGGCTTAT GATTCACTTC ACCTTGATAGC AAACGCAGCA AAAGGTGCTA AAAATTCAGG	1020
TGAAATCAAG AATAACCTTG CTAAAACAAA AGATTTTGAA GGTGTAACAG GTCAAACAAG	1080
CTTCGATGCA GACCACAACA CAGTCAAAAC TGCTTACATG ATGACCATGA ACAATGGTAA	1140
AGTTGAAGCA GCAGAAGTTG TAAAACCATA ATAGAAAAAT GTTGAAATAG GGAATGAGCC	1200
TTTGACTCAC TCCCTGTTTC GATATTTAAT ACTCTTCGAA AATCTCTTCA AACTGCGTCA	1260

747

ACGTCGCCCTT GGATTATATA TGTGACTGAC TTCGTCAGTC TTATCTACAA CCTCAAAGCA	1320
GTGCTTTGAG CAACCTGCGG CTAGTTTCCT AGTTTGCTCT TTGATTTTCA TTGAGTATAA	1380
GAACCTATCA AAAAGTGAGG GAAAACCCTC GGAATTATAA ATAGAAAGAG TGAATCTTAT	1440
GCTCCAACAA CTCGTAAATG GTTTGATTCT AGGTAGTGTT TACGCGCTGT TAGCCCTAGG	1500
ATATACCATG GTTTACGGAA TTATCAAGCT CATCAACTTC GCCCATGGTG ATATTTATAT	1560
GATGGGAGCC TTTATCGGTT ATTTCTTGAT CAATTCCTTC CAAATGAATT TCTTTGTAGC	1620
GCTTATTGTA GCTATGCTAG CGACAGCTAT TCTTGGTGTC GTGATTGAGT TTCTTGCTTA	1680
CCGACCTTTG CGCCACTCTA CTCGTATTGC TGTTTTGATT ACGGCTATTG GGGTTCTTTT	1740
CCTATTGGAG TATGGAATGG TCTATCTGGT TGGTGCCAAT ACCCGTGCCT TCCCTCAAGC	1800
GATTCAAACA GTTCGATATG ATTTGGGACC AATTAGCTTA ACAAATGTGC AGTTAATGAT	1860
TTTGGCCATT TCCTTGATTT TGATGATTTT GTTACAAGTC ATTGTCCAAA AGACTAAGAT	1920
GGGGAAAGCC ATGCGTGCG TATCAGTAGA TAGCGACGCG GCGCAATTGA TGGGGATCAA	1980
TGTAAACCGT ACGATTAGCT TTACCTTCGC TTTGGGTTCT GCTCTGCGG GTGCGGCTGG	2040
TGTTCTGATT GCTCTTTATT ATAACCTCTCT TGAGCCTTTG ATGGGGGTTA CTCCAGGTCT	2100
TAAATCTTTC GTTGCCGCG TACTTGGTGG TATCGGAATT ATTCTGGTG CGGCTCTTGG	2160
TGGCTTTGTG ATTGGTCTAT TGGAAACCTT TGGGACTGCC TTTGGGATGT CAGATTTCCG	2220
TGATGCCATT GTTTATGGAA TCTTGTGTG GATCTTGATT GTCCGCCAG CTGGTATCCT	2280
TGGTAAGAAT GTGAAAGAGA AGGTGTAAAC GATGAAGGAA AATTATAAAG TTAATATTCT	2340
ATGGTTACTC CTTTGTGTAG CTGGCTATAG CTTGATTAGT GTACTGGTTT CAGTCGGAGT	2400
ACTTAATCTA TTCTATGTAC AGATTTTACA ACAAATTGGA ATTAATATTA TTTGGGCTGT	2460
TGGTCTCAAC TTAATCGTTG GTTTTTCAGG ACAATTTTCA CTTGGTCATG CTGGTTTCAT	2520
GGCGATTGGT GCCTATGCAG CAGCTATTAT TGGTTCTAAA TCACCAACCT ACGGTGCCTT	2580
CTTTGGAGCT ATGCTTGTAG GGGCTTTGCT TTCAGGAGCA GTTGCCTTAC TTGTCGGCAT	2640
TCCAACCTTG CGCTTGAAGG GGGACTATCT TCGGCTAGCA ACTCTGGGTG TTTCTGAAAT	2700
TATCCGTATC TTTATCATCA ATGGTGGAAG CCTTACAAAT GGTGCGGCAG GTATCTTAGG	2760
GATTCCTAAC TTTACAACCT GGCAAAATGGT TTACTTCTTT TCGTGATTA CAACCATTGC	2820
AACCTTGAAC TTCTTGCGTA GCCCAATTGG TCGTTCAACC CTCTCTGTTT GTGAAGATGA	2880
AATCGCTGCT GAGTCAGTTG GGGTTAATAC GACTAAAATT AAAATCATCG CTTTGTCTTT	2940
TGGTGCCATT ACTGCAAGTA TTGCTGGGTC ACTTCAGGCA GGATTTATCG GGTCTGTTGT	3000

748

ACCGAAAGAT TACACCTTCA TCAACTCAAT CAACGTTTTG ATTATTGTTG TATTTGGTGG	3060
ACTCGGTTC ATTACAGGTG CGATTGTTTC GGCTATTGTT CTGGGAATTT TGAATATGCT	3120
TCTCCAAGAT GTTGCTAGTG TGCCTATGAT TATTACGCT TTGGCCTTGG TATTGGTAAT	3180
GATTTTCAGA CCAGGTGGAC TCCTTGGAAC ATGGGAAC TGAGCTATCAC GTTCTTTTAA	3240
AAAATCTAAG AAGGAGGAAC AAAACTAATG GCATTACTTG AAGTAAACA GTTAACCAA	3300
CATTTTGGTG GTCTAACAGC TGTGGGAGAT GTGACTCTTG AATTGAACGA AGGGGAAC TG	3360
GTGGATTAA TCGGTCCAAA CGGAGCTGGG AAAACCACCC TTTTCAACCT TTTGACCGGT	3420
GTTTATGAAC CAAGCGAGG AACAGTAACC CTAGATGGTC ACCTTTTGAA TGGGAAATCA	3480
CCTTATAAGA TTGCCTCTTT GGGACTTGA CGTACTTTC AAAATATCCG TCTCTTTTAA	3540
GATTTAACAG TTTTAGATAA TGTTTTGATT GCTTTTGGA ACCATCACAA ACAGCATGTT	3600
TTTACTAGTT TCTTACGCTT ACCAGCTTTT TACAAGAGTG AAAAGAATT AAAGCTAAA	3660
GCTTTGGAAT TGTGAAAAT CTTTGATTGA GATGGTGATG CAGAGACTCT TGCTAAAAAT	3720
CTTCTCTACG GACAACAACG TCGTTTGGA ATTGTTCTG CCCTTGCTAC GGAACCTAAA	3780
ATTCTCTCT TAGATGAACC AGCAGCAGGT ATGAACCCAC AGGAAACAGC CGAATTGACT	3840
GAGTTAATTC GTCGTATCAA AGATGAGTTT AAGATTACAA TCATGTTGAT TGAACACGAT	3900
ATGAATCTGG TCATGGAAGT AACAGAACGT ATCTACGTAC TTGAATATGG CCGTTTAATC	3960
GCTCAAGGAA CTCCAGACGA AATTAAGACC AATAAACGCG TTATCGAAGC TTATCTAGGA	4020
GGTGAAGCCT AATGTCTATG TTAAAAGTTG AAAATCTTTC TGTGCATTAC GGTATGATCC	4080
AAGCAGTTCG TGATGTAAGC TTTGAAGTTA ATGAAGGAGA AGTTGTTTCC CTTATCGGTG	4140
CCAACGGTGC AGGTAAGACA ACTATTCTTC GCACCTTGTC AGGTTTGTTT CGACCAAGTT	4200
CAGGAAAGAT TGAATTTTGA GGTCAAGAAA TCCAAAAAAT GCCAGCTCAG AAAATCGTGG	4260
CAAGTGGTCT TTCACAAGTT CCAGAAGGAC GCCACGCTTT TCCTGGCTTG ACTGTTATGG	4320
AAAATCTTGA AATGGGAGCT TTCTTAAAGA AAAATCGTGA AGAAAATCAA GCTAACTTGA	4380
AGAAGGTTTT CTCACGCTTT CCTCGTCTTG AAGAACGGAA GAACCAAGAT GCAGCCACTC	4440
TTTCAGGGGG GGAACAACAA ATGCTTGCCA TGGGACGCGC CCTCATGTCA ACACCAAAAC	4500
TTCTTCTTTT AGATGAACCA TCAATGGGAC TTGCCCAAT CTTTATCCAA GAAATTTTGT	4560
ATATCATTTA AGATATTGAG AAGCAAGGAA CAACGGTCCT CTGATTGAA CAAAATGCCA	4620
ATAAAGCACT TGCAATCTCT GACCGAGGAT ATGTACTGGA AACAGGGAGA ATCGTCCTAT	4680
CAGGAACAGG AAAAGAATCT GCTTCATCAG AAGAAGTCAG AAAAGCATAT CTAGGTGGCT	4740
AAAACAATCC AGTGGATTGT TTTAGTCGGC AGATGGAGAT TACGAAGTAA TCATCAATAT	4800

749

AGTCCGGGGG ACCTTTT TAG TCGGTAGATT GAGATTGCAA ACAAATCTGC ATCTACATTG	4860
AAAGCTTAAT TTCTAATAAT TGAAAAAATC GAATGAAAAA TTTCTTACCT TCATTCACAG	4920
AGCTCGATTT CAGAGCTCTT TTTGCTAGCT TATTCATACT TTTCTGAATT TCGAAAAAGA	4980
AATGTAAGCG TTTGATAGAT TTACAAAAAG ATTGTATAAT AGGGATAAGA ATAGAAAAGG	5040
AGAAGTCTCA TGGCAGTTAA AGATTTTATG ACCCGCAAGG TAGTTTATAT TAGTCCAGAT	5100
ATAACAGTAT CTCATGCAGC AGATTTGATG AGAGAGCAAG GTTTGCACCG TCTGCCTGTT	5160
ATCGAAAAATG ATCAATTAGT TGGTTTGGTG ACTGAGGGAA CCATTGCACA AGCAAGTCCA	5220
TCTAAAGCAA CAAGTCTTTC TATCTATGAG ATGAATTATC TTCTGAATAA GACAAAAGTA	5280
AAAGATGTCA TGATTCGCGA TGTGTCTACT GTCTCAGGCT ATGCTAGTCT AGAAGATGCA	5340
ACTTATCTGA TGTGAAAAA TAAGATTAGT ATTCTCCCTG TCGTAGATAA CCATCAAGTA	5400
TACGGAGTTA TTACTGACCG TGACGTTTTC CAAGCCTTTC TTGAAATTGC AGGTTATGGC	5460
GAAGAAGGGA TTCGTGTACG CTTTGTTACA GAAGATGAAG TTGGTGTCTT TGGAAAAATT	5520
GTTTCTTTGA TTGTAGAAGA AAATTTGAAT ATCTCCCATC CAGTCAATAT TCCGCGTAAG	5580
GATGGTAAGG TGATTATCGA AGTGCAAATC GATGGATCAA TTGATTTACC AGCCTTGAAA	5640
GAAAAATTTG AAGCAAATGG TATTCAAGTG GAAGAAATCG CTCGCACTTC AGCAAAAGTC	5700
TTGTAAGAAG GGAAGCCCAA AGGCTTCTTT TTTCATGAAA AGGGGATTAG AGCAAAAGAT	5760
GGAAAGAAAT GATAAAATAT GCTATAATGA AATAATGTAA AAAAGGAGTA TTTATGGACA	5820
TTTCAGTAAT TCGTCAGAAA ATTGACGCAA ATCGTGAAAA ATTAGCTTCT TTCAGGGGGT	5880
CTCTTTGACC TCGAAGGGCT AGAGGAAGAG ATTGCCATCT TGGAAAACAA GATGACAGAA	5940
CCTGATTTTT GGAACGATAA TATTGCGGCC CAAAAACGT CGCAAGAAAT AAATGAATTA	6000
AAAAACACTT ACAATACCTT CCATAAGATG GAAGAGTTGC AGGATGAAGT CGAAATTTTA	6060
TTGGATTTTT TGGCTGAAGA CGAGTCAGTG CATGATGAAC TGGTAGCGCA GTTAGCCGAA	6120
CTTGATAAGA TAATGACCAG CTACGAGATG ACTCTACTCT TGTCAGAACC TTATGACCAC	6180
AACAATGCCA TCTTGAAAT CCATCCAGGT TCTGGTGGTA CTGAGGCGCA GGACTGGGGT	6240
GATATGTTGC TTCGTATGTA TACTCGTTAT GGTAATGCTA AAGGCTTTAA AGTGGAAGTG	6300
TTGGATTACC AAGCAGGTGA TGAGGCTGGT ATTAAGTCGG TAACTTTATC ATTTGAAGGG	6360
CCTAATGCCT ATGGTCTCCT CAAGTCAGAA ATGGGTGTTT ACCGCTTAGT GCGAATCTCA	6420
CCATTTGACT CTGCCAAACG TCGCCATACC TCTTTCACAT CTGTAGAAGT GATGCCAGAA	6480
TTGGATGATA CTATTGAAGT GGAAATCCGT GAAGATGATA TCAAGATGGA TACCTTCCGT	6540

750

TCAGGTGGTG CCGGTGGACA AAACGTCAAT AAGGTTTCAA CAGGTGTACG TTTAACCAC	6600
ATTCCAAC TG GAATTGTTGT CCAATCAACA GTAGATCGTA CCCAGTATGG AAATAGAGAT	6660
CGTGCCATGA AGATGTTGCA GGCTAAGCTC TATCAAATGG AGCAAGATAA GAAGGCTGCG	6720
GAGGTAGATT CTCTCAAAGG TGAGAAAAAG GAGATCACTT GGGGAAGCCA AATCCGTTCT	6780
TATGTCTTCA CGCCTTATAC TATGGTAAAA GATCACCGAA CTAGCTTTGA GGTGCTCAG	6840
GTAGATAAGG TTATGGATGG GGACCTAGAT GGTMTTATCG ATGCTTATCT CAAGTGGCGA	6900
ATTAGCTAAG ATAGAAAGGA ACTCACATGT CAATTATTGA AATGAGAGAT GTCGTTAAAA	6960
AATACGACAA CGGAACAACT GCTCTACGCG GTGTTTCGGT TAGCGTTCAA CCGGGGGAAT	7020
TTGCTTACAT CGTAGGACCT TCAGGAGCAG GGAAGTCAAC TTTTATTCGT TCTCTGTATC	7080
GTGAAGTAAA AATCGATAAA GGAAGCCTAT CAGTTGCTGG TTTTAATCTG GTTAAGATCA	7140
AAAAGAAAGA TGTCCCGCTT CTACGTCGTA GTGTTGGGGT TGTCTTCCAG GATTATAAAT	7200
TGTTACCAAA GAAACTGTCT TATGAAAATA TTGCTTACGC TATGGAAGTA ATCGGGGAAA	7260
ATCGCCGTAA TATCAAAAGA CGAGTGATGG AAGTTTGGGA CTGTTGGA TTGAAGCATA	7320
AGGTTCGTTT TTTCCCAAAT GAACTCTCAG GTGGGGAGCA ACAGCGGATT GCGATTGCGC	7380
GTGCAATTGT AAATAATCCC AAAGTATTGA TAGCTGATGA GCCAACAGGA AATCTGGATC	7440
CGGATAATTC ATGGGAAATT ATGAATCTCT TGAACGGAT TAACYTACAA GGAACAATA	7500
TTTTGATGGC GACTCATAAT AGCCAGATTG TAAATACCTT GCGCCACCGT GTCATTGCCA	7560
TTGAAAATGG CCGTGTCGTT CGTGACGAAT CAAAAGGAGA GTATGGATAC GATGATTAGT	7620
AGATTTTTTC GCCATTTATT TGAAGCCTTA AAAAGTTGA AACGAAATGG TTGGATGACA	7680
GTAGCTGCTG TCAGTTCAGT CATGATTACT TTGACCTTGG TGGCAATATT TGCATCTGTT	7740
ATTTTCAATA CAGCGAACT AGCTACAGAT ATTGAAAATA ATGTCCGTGT AGTAGTTTAT	7800
ATCCGAAAGG ATGTGGAAGA TAATAGTCAG ACAATTGAAA AAGAAGGTCA AACTGTTACA	7860
AATAATGACT ACCACAAGGT ATATGATTCT TTGAAGAACA TGTCTACGGT TAAAAGTGT	7920
ACCTTTTCAA GTAAAGAAGA ACAATATGAA AAATTAACCG AGATAATGGG AGATAACTGG	7980
AAAATCTTTG AAGGAGATGC CAATCCTCTC TATGATGCCT ATATTGTAGA GGCAAACACT	8040
CCAAATGATG TAAAACTAT AGCCGAAGAT GCTAAAAAAA TTGAAGGTGT CTCTGAGGTT	8100
CAAGATGGCG GTGCCAATAC AGAAAGACTC TTCAAGTTAG CTTTATTTAT CCGTGTTTGG	8160
GGACTAGGGA TTGCTGCTTT GTTAATTTTT ATCGCAGTTT TCTTGATTTC AAATACCATT	8220
CGTATTACCA TTATTTCCCG CAGTCGCGAA ATTCAAATCA TGCCTTGGT CGGAGCTAAA	8280
AACAGTTATA TCCGTGGACC GTTCTTGTTA GAAGGAGCCT TTATCGGTTT ATTGGGAGCT	8340

751

ATCGCACCAT CTGTTTGGT CTTTATTGTT TATCAAATTG TTTACCAATC TGTCACAAA	8400
TCGTTGGTAG GGCAAAATCT ATCCATGATT AGTCCAGATT TATTTAGTCC GTTGATGATT	8460
GCCCTACTAT TTGTGATTGG GGTTTTCATT GGTTCATTGG GATCAGGAAT ATCCATGCGC	8520
CGATCTCTGA AGATTTAGGT AAAATAGCTG CTTTATGAG GAGATTGTAA AATCTCCTTT	8580
TTTGCTACAA GAGTTTGA AAAGAGATGC GCAGAAGAAA AGAGCTTCCA AAGAAGTCCC	8640
CCAGAGAAGA CTTC	8654

(2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19718 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

TGTCGCGTCA AAATCATTAC TATGGCTATG TATAGCCCTT ACTATGACTT GGCTAAACAC	60
GTTTCGCTTTC AAATTTCTAG GCTCAGGCTG AAACAGTCTC CCAGGCTGTT CACTCCCGAA	120
TGCTAAAATC GTTCTTGATC GCTTTCACAT TGTACAACAT CTTAGCCGTG CTATGAGTCG	180
TGTGCATGTC CAAATCATGA ATCAGTTTCA TCGAAAATCC CATGAATACA AGGCTATCAA	240
GCGCTACTGG AAACTCATTC AACAGGATAG CCGTAACTG AGTGATAAGC GATTTTATCG	300
CCCTACTTTT CGCATGCACT TAACAAATAA AGAAATTCTT GACAAGATTT TAAGCTATTC	360
AGAAGACTTG AAACACCACT ATCAGATCTA TCAACTCTTA CTTTTCCTACT TTCAGAACAA	420
AGACCCTGAG AAATTTTTCG GACTCATTGA GGACAATCTG AAGCAGGTTC ATCCTCTTTT	480
TCAGACTGTC TTAAAACCT TTCTCAAAGA TAAAGAAAAG ATTATCAACG CCCTTCAACT	540
ACACTATTCT AATGCCAAAC TGGAAGCGAC CAATAATCTC ATCAAACCTA TCAAGCGCAA	600
TGCCTTTGGT TTTCGAAACT TTGAAAACCT CAAAAACGG ATTTTATCG CTTTGAACAT	660
CAAAAAGAA AGGACGAAAT TTGTCTTTC TCGAGCTTAG CTGACTTCAA CCCACTACAG	720
TTGACAAAGA GCCTAATTTC CATAAAATTT GACATGGAAA TTATAAAACC ATTACTAGTT	780
TAGTCCTTTT TGATAACGTG CCAATTCGGC TTGGTTCGCC CAAACATAGT GACCTGGACG	840
GATTTCTACC ATAGATGGCT TATCAGTCTC ATAGTCGTGT TGACTTGGAT CGTAAACCTT	900
CAAGACCTTC TTACGTTCCA AGATTGGATC TGGGATTGGT ACCGCTGAAA GCAAGGCTTG	960
AGTATATGGG TGAATTGGAT TGTTAAACAA TTCTTCTGTT TCTGCAACCT CTACAATAAC	1020

752

ACCCTTGTA	ATAACTGCGA	TACGATCTGA	AATAAAGCGA	ACAACCGACA	AGTCATGGGC	1080
GATGAAGAGA	TAGGTCAGGC	CGAGCTCTTT	TTGGAATTTT	TTGAGCAAGT	TCAAGACTTG	1140
GGCACGTACA	GAAACGTCCA	AGGCTGAAAT	TGGCTCATCT	GCAATAACAA	AGTCTGGTTG	1200
CATGACCAAG	GCACGGGCAA	TACCGATACG	TTGACGTTGA	CCGCCTGAGA	ATTCATGAGG	1260
GTAACGAGTC	AAGTGCTCAG	CAAGAAGACC	TACTTCACGG	ATAATATTTT	GAACCTTCTC	1320
TTTACGTCT	TCTTCATCCT	TAAATAAAG	GTGATTGTAA	AGACCTTCAG	AAATAATATA	1380
ATCAACAGTC	GCACGTTTAT	TCAAACCTGC	GGCAGGGTCT	TGGAAATCA	TCTGGATTCG	1440
ACGAATCAAT	TCCGCAGCTT	GTTTACGCGA	TTTCTTACCA	TTAATCTTTT	GACCATCAAA	1500
AATGATATCT	CCATTACTTG	TATCATTTAG	ACCGATGATA	GCACGACCAA	TAGTTGTTT	1560
CCCACTACCG	GACTCACCTA	CAAGCGAGAA	AGTTTCTCCC	TTGTTGATAA	AGAAGTTAGC	1620
ATTTTAAACC	GCGACAAACT	TCTTACTTCC	TTTACCGAAG	GAAATTTCTA	AATCTTTGAT	1680
TTCTACTAAT	TTTTCAGACA	TTTCCTTCCT	CCTAGTCAGC	CAGATGGGCA	AATCCCATT	1740
TTTCACGGAT	CTTATCATGG	AGATTGCAA	TCACAGCTGG	TTTTTCTACT	TTCGGAGCAT	1800
CCTCATGAAG	AAGCCAAGTT	TTAGCCCAAT	GTGTCTCTGA	TACTGAGAAT	TGAGGAGCTT	1860
TTTGTTCGAA	GTCAATCTGC	ATTGCGTAGT	CAGAACGCAA	GGCAAAAGCA	TCCCCTTTCA	1920
GGTCAGTATA	AAGTGACGGA	GGTGTTCCTG	GGATTGAGTA	AAGATCCCCT	TTATCATCAG	1980
CAAGCTGAGG	CAAGCTAGAC	AAGAGACTCC	ATGTATATGG	ATGGCGAGGG	TCATAGAAGA	2040
CTTCTCAAC	CGTTCCATAC	TCAACGATTT	CTCCTGCATA	CATAACCGCT	ACCTTATCCG	2100
CAATACTTGC	CACCACACCA	AGGTCGTGGG	TAATAAAGAT	TGTTGTGAAA	TGATACTCGT	2160
TTTGTAAAGA	TTTGTAGCAA	TCAATAATCT	GAGCTTGAAT	AGTTACATCC	AAGGCAGTTG	2220
TTGGCTCATC	ACAGATCAAG	ACATCAGGTC	GGCAGGCAAG	GGCAATAGCA	ATAACGATAC	2280
GTTGACGCAT	TCCTCCAGAA	TATTGGAATG	GGTATTTCAT	AAAACGTCTA	TCTGCGTCTG	2340
GAATGCCAAC	CTTATTTCATG	TAGTCAATGG	CCAATTCTTT	CGCTTCTTTA	GCTGTTTTC	2400
CTTGGTGT	TACAATAACT	TCTGTAATCT	GACTACCAAT	TGTTTAAATG	GGGTCCAAAC	2460
TAGTCATTGG	GTCTCGGAAG	ATAGTCGCAA	TCTTAGCACC	ACGAATTTGT	TCCCAATCCT	2520
TGTGAGAAGA	TAAAGCTGTC	AAGTCCTGAC	CACGGTAGTC	AATACTACCT	TGGGCAATAC	2580
GACCATTTTC	TTGAGCATA	CCTGTGAAGG	TCTTGTGCAA	AACAGATTTA	CCTGATCCTG	2640
ACTCACCTAC	CAAGGCTAAT	ACTTCTCCTT	CGACTAGTTC	AAGGGAAACG	CCGCGAATGG	2700
CTGTCAATAC	TTGTGTCAG	ACGTCAAAT	CCACGACAAT	ATCGCGAGCA	GTCAAAATTA	2760
CATTTTTTTC	TTTGTGTCAT	TCTACTCCTA	TCTATGTGTA	CGTGGATCAC	TAGCATCCGC	2820

753

TAAGTTTGA CCAACTACGA AAAGGGACAA GGATACCAAG ACAAGGGTTG TCAATGGAAT	2880
CCAGAACAAG TAAGCATTTGG TTGTTACGTT TTGTGAATAA TCCGAAATCA AACGACCCAA	2940
ACTTGCCACT GTAATCGGTA ATCCAAGACC GAAGAAAGAC AAGAAGGCTT CGTATGAGAT	3000
AAAGCTTGGG AGCATTGAG TCATGGTTGT CACAATAACA GATACCAATT GAGGCATGAT	3060
ATTTTGGCA ACAATCTTCA AGGTGGTGT TCCCAAAGTA CGTGACGCCA AGTTGTATTC	3120
CAAGTCACGA TAGCGCAAGA TTTGCACACG GATCATGAAG GCAATACCAA TCCATGTTGT	3180
TACGCTCATG GCAAAAATCA GATTCCAGAA TCCAGCTCCG ATTGAGTAAG TCAAGACAAT	3240
AACAATCAA AGAGGTGGG TGTGAGAT GACGTTGTAA ACTTCCATCA TGACACGGTC	3300
AACTGATTT GAAATACCCC AAATACCACC GACAAAACA CCGATAACCA AGTTAATCAC	3360
TGTCGCAATC ACAGAAATGA GGATGGAGTT ACGAGCTCCG AACCAGACAC CGTCAAAGAG	3420
CGATTTACCG TTACTGTCAG TACCGAACCA ATGCTCCGCA TTTGGCTTGA TATAACGAAC	3480
ACTAAAGTCG TTTACCTTGC TGACATCATT GAAATCAAAC TTAGAAAACA TTGGGTAGAT	3540
GAACTTATC AAAATGATGG CTACCAAGAT TCCCAACATG ACTACAGTTG ATTTTCTCTT	3600
CATAAATGT TTAACACTG ATTTCCAGTA AGAATATGCT GGCGCATCAA TAGTTTCAGA	3660
GGCAAATCG TCACGTTTA CAACTGAAA TTTTCTTTA TCGATTGTAG ACATTATTTG	3720
CCTCCTTCT CAGTCAATTT AATACGTGGG TCAATAATAG TCATCCAAAT ATCTCCCAA	3780
AGACGTGAGA AGATAGAAAT ACATGTAAAG ATGAAGACAA GACCAACGAC CATAGAGTTA	3840
TTAGATGCTT TTACAGAGTC AATCAACATT TTACCCATAC CTGGGAAGGC GAAGACTGTT	3900
TCAGTAAGGG TTGCACCACC GATAACCCCA ATAATGGCAG CAGGAATTCC TGAAACCAGC	3960
GGAACCATGG CATTTTAAA GATGTGTTG TTTGAAATT CTTTTTCAGA CAAACCTTTT	4020
GCACGAGCGA AACGAACAAA GTCTTGAGAT TGCAAGTCAA TCATGTAACG ACGAATCCAA	4080
ATGGCTGTAC CAGGAGCACC CAACAAACCA AGGATGACTG CTGGTAAAC GTAAGAACGC	4140
CAATCTCCAG CTCCAAGAT AGGGAATGAA TCTGGAAGG CAATAGATGA TCCAATCAAT	4200
CGAACGATGT AAACCAAGGC AATCGTTGGA AGAGCAAGCA AGAAGGTCAA AGCCCTGTT	4260
GAGAGGCTAT CAATCCAAGT GTTCTTGAAA CGAGCCATGG CTGAACCAAG TGGCACGGCA	4320
AGAGCATAGG CAAGAACCAA ACCAATCAA CCAGTAATAG CAGAGCTGAC AATCATAGAT	4380
GGATATTGGT AATTACTTTC AGTCGCTGTA TAAGGATCAT CTTTCCATA GCTAGCTACT	4440
TCACGAGAGT CAGCTGACT AGGTGACTTG TAGGTTCTTG AGTAAATATT TACAGAAGAC	4500
GTTTTCTTAC CTGTGGGAA CTGAACTTGG GCAGTTTGG TTTGTCCTTG ACCTGAGTA	4560

754

ATAACCTGAA GAACTGGTGT ATTAGCATAG GTTGGGTAAG AGTCACCTAA ATTCAAGTTC	4620
ACAAAGTTTT GATGAACAAA TGGGAAGTGA CTGTTAAAGT ACAAGAGATA TTTATGTTTA	4680
GTTCCTGAAC CGACCAATGA CCATCCGATA GCTGGATCAT TTTCAAAACG AAGGTAGCGT	4740
TTCAAGTCTG GATTTTCAGG GTCTTGGATT TTATTGTAT GGTCAATGTC AATCAAGTTA	4800
GCATAGAAGT GAAAAACACG TTCAAAAATT GGAATTTTAC GACTAGCATA GAATTGACCA	4860
CTTTCAGTAA ATCTCTCCAA AGTCCAACCA TGACCTAATT GATTGATGTA CTTTTCATAA	4920
ATAGCTTTAT TGGTCGCATT TGCTTCTACT GTTACAGAAG AATCCATGCT ACTTGCCTTT	4980
TCTTGCAACT CTTTAGTATC GTAATACTCA ATGTAGCCCA TACGCTCAA CACAGTATTT	5040
TCATAGTTAT CACGTTTATC AGCCGTTGTC GCAATTTTAT TATAGTTAGG ATCCTGCTTG	5100
AAAATCAATT TTCGAGGAAC CAAGGTATAG ATAATCGTGT AGGTCAAAGT CGTTACTAAG	5160
AAAATCGAAA CCAATGACCG CAAAACACGC ATAAAAATAT ATTTTTCAT ATTATTTCTT	5220
TTAAAAATCC CAAAAGAACC TTCTCCTCAT GGAGAGAAAG TTCTATTAGA AATTATTTAC	5280
TTACATGAC TTGCCAATTC TTTTGTAGCT TTCTCATTG ATTCAGCTTT TTCTTTCAAC	5340
CATTTTTCAC GAGCTTTTTC ATACTCTTCC TTAGTACCA CTTTATCTTG TGATTTCAA	5400
TATTTGAAGT AAACATCTGA CCCCTTAGAG CCTGTTTGGC CAGAAGCTCC AGTAAATGGA	5460
ACAATTCGTG AAAGCACTGG TGCTGCACCA GAAGAAGCCA TAGCAGGAAT AAAGAGTGAA	5520
CTATCTGTCA ACCATGCTTG AGCCGCTGCA TATTTTTCAT AACGGACATT CAAGTCGCTT	5580
GTCTCTCTGG CAGCTTCATC AACTAATTTA TCGTATTCTT TCAAACCAAC TTGAACTACT	5640
GAAGGGCTAT TTGGATTATC AAATCCTAAA TATGTTTTTG TAGTTTCACT GCTAGTTGTT	5700
TTTAAATAT CCAGGTAAGT AGATGGGTCT TGATAGTCTG GCCCCATGA AACTCCTCCT	5760
GATACATCCC AATCCTCAGA TGAAGCATTG GCAGCATAGT AAGTAATATT AAGGAATTCA	5820
TCACTTGTCA TTTGTTGAAT ATCAACAACG ACATTTTCAA CACCAAGAAC TGTTTCTACA	5880
GATTGTTTAA AGGACTGAAT ACGAGATATG TAGTTTTTTG ATGCTTGGTC TACTGGAACG	5940
TCCAGATGAA TAGGAACTG AACGCCGTCT GCTTCTAAAG CTTTCTTAGC TTTCGCAAAAC	6000
TCTGCCTTGG CCTTGTGAGC ATTGAATAAA CCATCCTGCC CATCAGCTAA ATTCACACCT	6060
TTCCACTCAT CACCATAAGC AGGAAGTTGA GCAGCGACTA AATCACCAAA GGTCTTCTCA	6120
CCAGCTGAAA CAAAGTCTGG TTTTACAAAT AAATTACGAA CTGCTAAAGC TGCTCCATCT	6180
TTACCATTGA TTTGAGCTGA GTAAGCTGAG CGATCAAGAG CAAAATTCAA GGCTTGACGG	6240
AAATCTTTGT TAAGCAATGC CTTCTTAGTA GCTACTTTCT CTGAATCTGT AGTTTTAGAA	6300
GTATAGTTGT AACTTTGGCG ATCAATATTC ACACCCAGAC CAGCAATCCC AGAGCCTGAT	6360

756

CGTTTCCCCG ACTCCTGACT CATATCCATC ATCAAGCGAA CAGGAGCAAC AGAAGACAAA	8160
ACTAATAAAA TAGTCCCCAC AATTCCGTAA CTCAGAATCG TATCAATATA AAGACTGTGG	8220
GCATGTTTCAT GATAAGGAGC ATGTATCCGA GGATAAGAGT TCATATAGGT CAATGGCCCT	8280
TCACCCCAAA AAGGATTTTG CTAAACAAG GCCATCCCAG CATCCCAGAT AGAAATGCGT	8340
TCTTCCATAG AAGAGTCTAA AGTACCCATT CGAACTCCCA AATCACTAGA AAAGAGGAAA	8400
CTCAAACCAA TCGCGAAGAC CCCAATACTA AGCCAAAAGG CCTTCCAGTT TTAAATAGTC	8460
GTAAGAGAT AGATAATTGC TCCAGCGATA ATAGCAGGAA AGGCAGTTCG ATTTTGAGTA	8520
AAGTTCAAAC CAAAGAGATT AACAAAGCCT GCAATCACAC AGAATACTTT CAACCAATTC	8580
AACPTGGTCG TTGTAACAG ATAGAAAGCA ATCATAATAC AGAAACAACA AATAATTCCA	8640
TAATAATTAG GATTAAAGAA GGTCACTTCT GCCCGGTTCT GATGCCACAC CTGCATATTG	8700
GGTGAAAGAA AAGCATAGTT AAATTCTTTC ACAATTGGA AATGTTCTAA ACTGGCAAAA	8760
GCAGCTGACA AGACACTACC AAACAAGACA AACTGCAAAA TCAATCGAAA GAATTTATGG	8820
GATAAATCG ACTGATAGTG CAAAAGAAA ATAGTAAATA GAAACATTCC TACTGAAGCC	8880
ACAAGACCCA TCCAATTTTG TGCAAGAATG GATATAACAG TACTATAGCT AAGAAAAAGA	8940
AGCAGCATCG GATGCTCCCC CATTTTCTGA AGAATACTTT TCATGTCTCC TGTAAAAATC	9000
AAACTGATAA TATATAACA GAGTACAACT ACAAAAAGAT AAAAGGGTAA AAAGATACTC	9060
AGGATAATTC CCAATAAAAT CAGCTCTTTA CTAGACAACC CCTTCAGCTT TTCAATAAAG	9120
CCTATTGATT TCAAAATGAA TCCTTTCTCT CCAAAATCAGC TGATTCAGAT AATAGTAAGC	9180
TATCCTATAT TGTACCACTT TTTTAGCAAT TTGAAAACAA AGGAAACGTT TTCCAAAATA	9240
AAAACCCTAT TTTATCCACC ATATCAAGGC TTCAAAATGA TACTTCAACT CCATTCTCAA	9300
TTACCCGATA AGTCTGATTT TGCAAATCAA TTTCTACTAC TGCTGTTACG GACTTATCTT	9360
TATTTTGACG TTTGATTACA ATGCTGTGAG CTGTTGGTGT CTCTATCTCA GTAGTCCCTT	9420
CTAGATCAAA GGCTTCTGAA CGGTTACGGA AAGAAAATAG ATTGAGAAGG GCCTTCACAA	9480
CAGGTCGTTG CACTTCTTTT GCTATTTCTT CGTTGCTATA GTAATGACGA TTAATATTTT	9540
GACCTTCTTT AGTTTCTTCT AATAATTTCA AGTCATTCTT GCCTGCTAAT AGACCCACAT	9600
AGTAAATCTG AGGAATACCT GGGGCAAAAG CTTGAATTAG ACGAGCGAGA AAATACTTGA	9660
CATCATCATC TCCAAGCGCT GAATAGTAGG TTGAATTGAT TTGGTAGATA TCTAAGTTGT	9720
TATACTCGGC ACTAGAGTAC TTACGTTTGA CATTGGCTCC AACCTTATAG AGTTCATTTG	9780
AAGCATAGTC AATCTCCTCA TCGGTCAGGA TATCCTTGAC ATCTACTACT CCAATCCCAT	9840
CATGGGTATC TAGCGTCGTA AATTGCTTCA TCGGGCTCAT CTTTAACCAC TTAGCCAAAC	9900

755

TGTGTGTAAT AGATATTGTC CTTGTATTCT TCTGCAACCT TAGAATAGTT GGAGCTGGTA	6420
GGGTAAAGAC GGGCATAACT ATAAGCTCCA CTAGTGAAGT TACGCTCTAG CGACTCCTGA	6480
TCTGATCCAT CATAGTAAGC TAGATTGATA GTATCTAGGT GGACATTTTC TTTATCCCAA	6540
TATTGCTCAT TTTTACAAA CTCTACAGAA GATTTTGCAG TCAACCCTTT CAACAAGAAT	6600
GGACCATTAT AAAGCAAGGA TGTCGGATCT GTTGGTTTAG CAAAATCGCT TCCTTTTGAT	6660
GTTTCGAATT CTTCATTCAG AGGCCAGAAA ATAGAATAGG TCAACTTAGA GTTCCAGAAC	6720
GGTTCAGGCT GGTTCAAAGT GTATTGTAAC GTATAATCAT CAACCGCCTT GACACCAACT	6780
GTTGAAAAAT CTGTTGAAGT TCCTGATAGA TAATCTGCCA AGCCTTTAAC CGAATTTTCA	6840
GCTAAATACA TAGCTTCTGA TTTTATCTCT GCTGCGTGTT TTAAACCGTT CACGAAATCT	6900
TTAGCCGTCA CCTCTGCATA TTCTTCTCCA TCAGAGGTAA ACCATTTAAC CCCTTTACGA	6960
ATCTTATAAG TGTAGGTCAA ACCATCCTTA GAGACTTCCC AATCCTCTGC AACTGCAGGA	7020
GCAAGATTAC CGTAATTATC GTTAGTGAAT AAACCATCAA TCCCATTTGA AGTCACTACT	7080
GTTGTACTAT TTTTACTTGA AATCAGGTAG TCCAAGGTTT CTGGGTCTGC TGTATAAACA	7140
TAGCCATAAG CTTTAGGGGC TGATGAATCA GATGATTTTG AAGAACTGCA TGCTGCAAGT	7200
ACACCTGCTG CTAATAAAAC AAGACCTGCT GTAGCAAATA CACGATTTT TTTTCAATTTTC	7260
TACTCCTCTG TTTATGTGAA TTATAGATTG ACAACCATTA TATCACATTA TCCATTAAAA	7320
ATCAAACAAA TTTTCAGAAT ATTTAGGCTT GTTGGCACAA ATTTTTCATT TTTTTTGAAT	7380
ATATGATTCA AATTGTCGTT CGAAGTGTCA AAGACTACAG TGAAAATAGG AAATTTGACG	7440
CAGAAACTTT GGAGTTTAGG AAGACATACA GTAAAATGAA ATACGGACGG AACAATGTGA	7500
TTTTGGAAT CAAATTAAAT TATAACAATA TTGTAGAAGT ATCATTCTAG TATTCAAGAT	7560
TCAGTTTACT ATGTCTTTTC ACACCAACCT TATCCCGAAT TCAATTACTT TTGTGATTTA	7620
CATATATAGA TTAAGACTAT CTTTATACT TTAAAATTTTC TCGCTACCTT ATCCACTATA	7680
TGCTCCTCGC TATCACGTTT CTATTCATAG CCTACGATTT CACTATTGCT TTCTCTGACA	7740
ATTCTTATTT CCTGCGTCAG ACTTAAAACG ATCTATCCCC AGACCATTTT AATCCGCTAC	7800
CTCACGATAG TCAGGCTTGG GGAGCGCTAT TGTATTCAAC GGTAGTGGAG CCCTACAGAG	7860
GACTTACACC TCAGATGCAC GACATGCCCA TCGTATAAAA AATCTCCTAC CCAAGGTAGA	7920
AGATTTCAAA CTTATAAAAC TTAATCCGTC ATGTCCGATA CCAACATTCTG ATGCTCCAAT	7980
GGAATACTGC ACATAACTAG CAAGAAAATA AAGCCTGACT GAATCCAGAA GAGAGCCAAG	8040
TCAAAAATTC CGTGACAGC AACCCTGTA AGGAAAGATA GATAAAGGCC GATAATCGGA	8100

757

GCTCTGTTCT	GGAAGCTGTA	AGAGTATAAA	GTGTCACCAT	TGGAAGAGCA	AAATCATAAA	9960
CATAGTAATC	ATGGTCTGCT	ATTTTAAACT	GAATCGAATA	GTGTTTCATGA	ATCTCAGGTA	10020
AAAGCTCTGT	CCCATACTCA	GCAGCGATAT	CTCGAACTTT	GTCCAATAAA	TCCCAAATAT	10080
CTGGTTCCAC	AAAGAAATCA	TTAGTATCCA	ATTTCTTCAC	TGCATAAGCA	AAGGCATCTA	10140
GACGAATCAA	ATCACACCCA	TTACTTGCCA	AGTGCTGAAT	GGTCTTACGG	ATAAATTCCA	10200
TAGTTACTTC	TTGGTCCACA	TCAAGATCAA	TCTGCTCCTC	ACCAAAGGTA	TTCCACAAAT	10260
GTCCACTGA	ACCATCTTCA	AACACAATCT	CTTGCTTTGG	TGCACGATCC	TTACGCTTGT	10320
AAATTAAATC	TACATCAGAC	TGTGTCGGAC	GGTTTTCTGG	CCAAAACCTA	TCCCAGTTTA	10380
AAAAGAGAGC	TTTAAATTCA	CTGGCTTCAT	GTTCCTCTTG	ATAGTCCTTA	TAATACTTGG	10440
ATTGACGAGA	AATATGATTA	ATCATAAAAT	CAAACATAAG	ATAATATTTT	TCACCTAAAC	10500
GCTTCACATC	CTCCCAATCA	CCAAAAGCTG	AGTCCACTTC	GTCGTAGTCA	ACTGGCGCAA	10560
ATCCACGATC	AACTGTTGAT	GGGAAAAATG	GTAAGAGGTG	AACTCCTCCA	ATAGCATCTC	10620
CAAAATGCTC	TTCCAAATTA	TCATATAAGT	CTTTAAGATT	ATTTCCAAGG	CTATCAGAAT	10680
AGGTAATCAA	CATGGTTTTA	TTTTGAATTG	GCATCATTAC	TCTCCTTTTT	CTAATTGAAG	10740
CCAAGTCTCA	TATGATCTGG	CTTCATAAAT	AAAATTCATT	TTAAATCTCT	ATTATCATC	10800
AAACTCGTAC	TAATATAGAC	TGTGATAAAC	AAAGTACTAC	TTTCTTGTTT	TCTGCATAGA	10860
ATTATCAACA	AGCTAAACTC	TTCTCTGTG	TCAAAGACTA	TAGATTCCAT	GAGCTCTTCT	10920
TATACTCTTC	GAAAATCTCT	TCAAACCACG	TCAGCTTCAC	CTTGCCGTAG	GTATGGTTAC	10980
TGACTTCGTC	AGTTTCATCC	ACAACCTCAA	AACAGTGTTT	TGAGCAACCT	GCGGCTAGCT	11040
TCCTAGTTTG	CTCTTTGATT	TTCATTTGAGT	ATTACTTCAC	TGCCCCGTG	CTCATTCCTG	11100
AAATGATATG	GCGTTGGAAG	AAGAGATAGA	CAATGGTGAT	ACTGATAATG	CCGACCACGT	11160
AAGAGGCAAA	GCTTGGTCCG	TAGTCGTTGA	AATATTGGCC	TGCGTAGTTG	TATTGGAACA	11220
AAGGCAGAGT	CCACATTTTG	GAATCCCGGT	TCAAGACAAG	GAGTGGCAAC	ATGAAGTCAT	11280
TCCAGAACCA	AAGGGCATTG	ATGATCATGG	TTGTCGCATG	CATCGGTTTC	ATCATTGGGA	11340
AGATGATGCG	GAAATAGGTT	GTAATTTGAT	TAGCCCCATC	GATCTCTGCT	GCTTCATCCA	11400
GACTTTCTGG	AATCGAGATT	TTGATATAGC	CAACATAGAG	AAAGAGGGTC	TGTGGAATCG	11460
CATAGGTCAA	GTAGAGCAAG	ATCAAACCAA	AGGTATTAGC	CAAACCGAGT	TTACTCATCA	11520
TAACCGTAAT	CGGAATCATG	ATGACTTGGA	AAGGTACGAA	GATTCCGAGG	ATTAAGAGGG	11580
TATACATGAT	GGTAAAGGCT	TTTCTTTTAC	TCATATTGCG	AGCGATGGAG	TAGGCTGCCA	11640

758

TAGGGATAAA	GATCATTACT	GCAAGTAAAG	ACAAGACAGT	GATGACGACA	GAGTTCCAAT	11700
AATAGCCTCC	AATCCCATCA	GCTAAGAGAC	GGCTAAAGTT	GTCCCATGTG	AAGTTGGTTG	11760
GAAAGCCAAA	GAAATTATCT	ACAATATCCT	TAGTGGGTTT	GAAGGAACTA	AAGAGGGTAG	11820
CAAGGAGCGG	CACTAAAATC	AGAACCGATC	CTAGAATCAA	TAGAATGTAT	TTGCCAATCA	11880
GGGCTTTTCT	TTCATCTTGT	TTCATCATGC	TTCTCCTCTT	AAATTTCAAA	TTTCTTAGAT	11940
ACTCTCAATT	GGATGATCGA	AATCACTACA	ATTAAGAAGA	ACAAGATTAC	GGCAATGGCA	12000
TTGGCATAAC	CGAATTGGTT	GTTTTAAAG	GCATAGTTAT	AAACCAAGAG	CCCAAGTGAG	12060
GTGTGGCAT	TGTTGGACC	ACCACCGGTC	ATGGCAAAGA	CTTGGTCAAA	GGCAGTCAGC	12120
CCACCTTTTA	GGGCTAGGAT	AAAGACCATA	GAGACACTTG	GTAGCAAGTA	AGGCAATTCA	12180
ATGTTCCAGA	AACTTGCTT	GCTAGTCGCA	CCATCAATCC	TTGCTGCCTC	TGTAATCTCA	12240
GTMGGAATAG	ATTGCAAACC	AGCTAGGAAG	ATGATGATGG	GCATAGCCAC	CCCTTGCCAA	12300
AGAAGGACAA	AGACAGCCGC	AAAGATTGCT	CCCCACTTAG	TCCCTAAAAG	ACTGGTTTGG	12360
AAAAATCAA	TATGAAGGGC	ATTTCCAATC	GCTGGAAGAC	CGTAGTTGAA	GACTTGCTTG	12420
AAGATCAAAG	CCACTGTCAA	ACCAGATAAA	ACAGCTGGGA	AGAAGAACCA	AGCACGGAAG	12480
AAGGTTTGGC	CTTTGATTTT	AGAATTCAAG	ACACGCGCAA	TGAAGATCCC	GAGTGCAATC	12540
TCACCAACCA	CCATGGCAAT	CGCAATGATT	GCGGTAAAGC	CAATCGCATT	CATGAATTTT	12600
GGATCCATGA	AGAGGAGCTT	AAAGTTGTTT	AAGCCAACAA	ATTTGTAGTT	ATAAGTCAAT	12660
CCTGTCCAGT	TGGTAAACT	GTAAGAGGCT	CCTTGAAACA	TCGGCACATA	GAAGAAAATT	12720
GCTTGTAACA	AGAGGGGGAT	GACCACAAAA	GCCCATGCCC	AATATTTTTG	TAATACTTTT	12780
TTCATAGTCT	CTCTACTCCT	AATCCACATC	CGCTTTCATC	GGGTAAAGA	AGGCATTCAA	12840
ATCATTGACC	ATGCCTTGTT	TATCACCGGT	CAAGACATAG	TTCATGGTCA	AGGTATGGAA	12900
GTCTGCTTCA	CTGGTCCAGT	ATTGTTGCAA	CCAGACCAAG	TGACGATCCG	TAAAGGCATA	12960
TTCGGTCATA	CCAGCAAGCG	GTGAATCTTC	TCCTGCTTGT	TTGACCCCTT	CGATCGCTGT	13020
TGGAGATCCG	TCCACATCGT	AGTATTTTTG	CATGACTTCT	GGACGGGTCA	TATATTCAC	13080
AAAGGCATTG	GCTTCTTTTG	GATGTTTGGT	GGTGGCTGAG	ATAGACCATG	CCAAGTCTCC	13140
CGCACCAACG	GTTAAGCTTT	GTCCTTTTTC	TTTTCTGGA	ATCATGAAGG	TCCCAATCTT	13200
AAAGTTCGGT	TTTTGTTTCA	TAATCGCTGT	GATCGCCCAA	GACCCATTTG	GTGTCATGAG	13260
GACATCCCCA	CGTGCGAAGG	CTCCGATAAC	ATCGGTATAG	CCAGCACCTT	CCCAGTTCTT	13320
TTGCTTAGAT	CCATTGATGC	GAAGGATGTC	CATGACCTTG	ATATCATCTT	TCATAATCGG	13380
ATCCGACAA	TTAATGGCAT	TTGGTTGAGA	ATAACGAAGG	TATTGATTTG	CTTCTTTTCC	13440

759

TCCACCTGTT	GCTGTCGCAA	AGGCTAATG	ATTGTAACCA	TTGAGTGTCC	AAGCATCTGC	13500
ACCTGCAATT	CCAAATGGTG	TTTGTCTTT	AGCAACGATA	TCTTTGACTA	ACTGTTCAAA	13560
TTTATCCCAG	GTTTCAGGAA	CCTTCAAGCC	CAGTTCTTCG	AATTTATCTT	TGTTGTAGTA	13620
AATTCCATAA	GCATTAGCTG	TAAAAGGAAC	GTTGTAAACT	TTTTCGTTTA	CAGCATATTT	13680
TTTACCGTAG	CCATTTTTC	CGCGTTTCAG	GTAAGTCTTG	TTGCTCAAAT	CTTCAAAAAC	13740
ACCTGCTTTT	GCCCATTTCT	GCAGTTCGAT	GGACTGTGGG	TAAATATTGA	CCACATCAGG	13800
CACATCTCCT	GCGAGAACGC	GTGTCTTCAA	TACTTCACCA	GCATTGGTGA	CATTGACGAC	13860
TTTGACCTTG	ATCTTAGGGT	TTTCTTCTC	AAAATCACGA	GTGATTTCTT	CCAAGGTTTT	13920
GGTCATTTCT	TTTTTCTGGT	TGAAATACTC	GATGGTCACT	GTGCCATCCG	CAGATTTACC	13980
ATAGTTGGAG	CAAGCGCCGA	GCCCAAACAA	AGCTAAACCT	GTAAGTTCGA	GAAGTCCGAT	14040
TTTTTTATAC	CATTCCATTA	GAAAGCCTCC	TTTATAAAT	TATACACCCT	TATTGAACTG	14100
CACCCCAAAA	GTTAGACAGA	ATAAATCTAA	CTTTTGGGGT	CAGTACATAT	CATAGTTTTT	14160
TAAAAATATA	CTGTCTACTC	AAAAAATCTC	CTTGGGATAA	GATAACAGTT	AAGCCCGCAT	14220
ACATTAGTTC	TGCACCTGAG	TAAACTTCGC	CATTTTCCTG	TAATTTATAT	AGTCCCTCTT	14280
CATCCAAATC	TTTTAATTTT	AAAGTTGTTT	CCATGGTCTC	TACAACAGAT	AAAACGCGAA	14340
CGTAGGTAC	AATCGTTTGA	TTTCCGTAAT	TAAATTGTAC	AGCTGCTTCA	TTGGATACAG	14400
TATCAGGATT	AATTAGTCTA	TACTGCTGTC	CTAACTGAAC	TACTGGTCGT	AATTCTTTAT	14460
ACAAAGTCAC	CTGATTAGCA	ATCGTAGCTT	TCTCTTCATC	TGATAAATTT	GTCAAATCAA	14520
GTTCATAGCC	CAAATTTCCC	ATCATTGCTA	CAAGGCCACG	TGTTTCTAAT	GGTGTCAATC	14580
GTCCCATCTG	ATGATTCGGT	ACTGCTGACA	CATGAGCCCC	CATAGAAATG	GTTGGATAGA	14640
GATAGGATGA	ACCGTATTGA	ATTGGTAAAC	GTGCAATGGC	ATCAGTATTA	TCACTAGCCC	14700
AGACTTGTGG	GAAATAGCGC	ATCATACCAA	GATCATTTTC	TCCACCACCA	CCAGAGCAGG	14760
ACTCAAAGAG	AATATGGCTG	TGCTTCTCTG	TCAGATAAGA	AACGAGTTCA	TAAAGCCCCA	14820
GCATGFACTG	ATGAGATTGC	ATCTGTGTCT	CTAGATAAGT	TAATCCATTC	CCTAGCTTAG	14880
TGATATTGCG	GTTTATATCC	CATTTAATGT	AATCAATATC	ATGATAAAAT	AGGAGTTGAT	14940
CTAAGACACT	TTTCAAGTAT	TCTACTACCT	GAGGATTGGC	AAGATTAAGT	ACTAATTGAT	15000
TCCGAGAATA	AGTATGCTCA	TAGCCAGGAA	CCTGAATAGC	CCAGTCAGGA	TGTTGACGAT	15060
ACAAATCACT	ATCTACAGAA	ATCATTTCGG	GTTCTAACCA	AAGTCCAAAC	TGCAAACCTC	15120
TTTCATGGAT	AGCTGAAATC	AGACTTTCTA	GACTTCCACC	CAGTTTTTCC	TCATTAACAA	15180

760

CCCAATCACC	TAAAGCACGA	TTATCATCAA	AACGATTGCC	AAACCAACCA	TCATCTAATA	15240
CAAAAAGTTC	AATGCCAACT	TTCTTAGCTT	CATCTGCTAA	CTCTAACAGT	TTTCTCTCT	15300
GAAAGTCAAA	GTAAGTAGCT	TCCCAGTTAT	TGATTAGAAT	TGGACGTTCT	TTTTTAGAAA	15360
ATTCACTTAG	CATAATGTGC	TTCAGTACAA	AATTCTGACT	TTCACTGACTA	ATACCAGTTA	15420
ATCCCTGATC	TGAATGAGTC	ACTAAAGCTA	CCGGTGTTTC	AAAGTATTCC	TCAGGAGCTA	15480
ACTTCCAAGA	AAAGTTTCT	GGATTAATGC	CAATAGCCAC	CCGAACCTCA	TTCAATTGAT	15540
TTTTTTGAAC	AAAAGCTTCA	AAGTTGCCAC	TATACATTAG	TTGAATAGCA	AACACATTCC	15600
CAGCATCCTC	TGTGACTCCT	TGTTTCGCATA	GTAGAAGAGC	TGGTGTTTGA	GCATGACCAG	15660
AAGCACCTCG	GTTTGAACCTA	ATCGAAAAGA	TTCTTGTTTC	TACCTGTGTA	CGTCTAACAG	15720
TCTTTTCACG	AGCATAAGCA	CCCTGCAGAG	TTACTATTTC	GTAATCTGCA	GCTGGAAAAT	15780
CAGCCATAAA	AGAAAAATCT	TTATGGATGA	CAACTTCCTG	ATTACTATTA	TTATCTAATT	15840
TACTGTAGCT	AGCAATAGTC	GCATCATTAT	TAAAAGTAGT	ATAATACAAA	GTCAGACTAA	15900
GTTGAGCCTT	AGAATCTTCT	AACATTAAGA	CAAGAGTCTC	TGTATCGTCC	ATGCTATGTG	15960
GAGAAGGTAA	GCCCTGTGGA	CCATTCTGAC	CTTTTAAAAT	CTTTGCTTCT	ACAAATCGAA	16020
AGTCTGTTAC	TTCAAGTTACA	CTATGCTGAA	CCTGTATGGT	TGGTTTCCTA	AAATCTCCTA	16080
AGCCATGTTG	TCCAAAAATC	TGTCGCTGAG	TATCTAAACT	AAAGTTTCGA	TTAGTAGCCG	16140
TTGGATTTCC	TGAAAAGGCA	TGGTCTCGTT	CATAAACACT	ATTGGAACCT	TTATAGTTCT	16200
TAATAGTCTT	TCCTAAATGT	TTCAAAAAGTA	AGTAGCCATT	TCGATTTTCA	ATAATCAAAC	16260
TTAGATTTTT	ACTCTCAACA	TAAAATAGAT	TATTCTCTAT	CCTAACTCCC	ATTTACTTCA	16320
CCTCATCACT	TTATTGATTA	TATTTTATCA	CCTGAAATCG	CTTTCCAAAA	TAGAAAAATG	16380
TCTCAAGAAT	ATGGTAAAAT	GTTAGGTAGG	AGGTAGCACA	TGTTAGTTTT	TTCAGAATAC	16440
CAGACTGGAA	CAATCGACCT	TGCCCTAAGC	TTTATATGGAT	ATGAGGAATG	CACACCTAAT	16500
TACTCTTTTG	GTCCAGCCAT	TCGTGATACA	TACGTTCTAC	ATTACATTAC	TAAAGGACAA	16560
GGAAAATTTT	ATTACAAGGG	TAAAATTGTT	GATTTAAAAG	AAGGAGATTT	CTTCTTATTA	16620
AAACCAGAGG	AACTAACCTT	TTATCAAGCA	GATAGTAAAG	AACCTTGGGC	CTACTACTGG	16680
TTAGGAATCA	CTGGAGGGAA	AGCCCCTGAT	TATTTTGCTC	TTTCCCAAAT	TTCTGATCAA	16740
TCCTATCTCA	TCCAATCTGA	AACTTGTCAT	ACCCAGACTA	CTGCAAAACT	CATCTCAGAC	16800
ATTGTCCGCT	TCGCTCAGAT	TACAAAATCA	AGTGAATTAG	CTCAACTCCA	TATCATGGGA	16860
CAACTTCATG	AACTGATGTT	TCATCTGGGA	ACTATTGCTC	CCAATCAGAA	AAAAAAGAAT	16920
ATTTTCATCAA	CCCACCAACT	CTATCTTGAA	TGCAACGAT	TAATTGATAG	CCACTATCCT	16980

761

CAATCACTTA CAATTCAAGA TTTAGCAAAA GAACTATCCG TTCACAGAAG CTACTTATCA	17040
AGCGTATTCA AAGAATTAA TACCTTATCA CCCAAAGAAT ACCTACTCTA CGTTCGAATG	17100
CACCGAGCTA GACAACCTCT CGAAAATACC CAAGAGTCCA TCAAGGTAAT TGCATACTCG	17160
GTAGGTTTTT CAGATCCACT CCATTTTTTCG AAAGCTTATA AACAACTCTT TAATCAGACT	17220
CCAAGTCATA CAAGAAAAGA ATACTCTCAA TACCAACTAG TAAGAAAGGC AACATTATGA	17280
AATCCTACCA AGCTGTCTAC CAAATCCTAT CTAAAGAAAC CGACTATATC AGCGGAGAAA	17340
AAATCGCAGA AAAACTATCC CTAAGCCGAA CAGCAATTTG GAAAGCCATC AAGCGACTAG	17400
AACAAGAAGG CATTGAAATT GATAGTATCA AAAATAGAGG ATATAAACTG ATGAATGGTG	17460
ACCTTATTCT TCCAGAGATT CTAGAAGAAA ATCTTCCAAT TAAAGTCAGC TTTAAACCCG	17520
AAACAAAATC AACACAATA GATGCAAAAG AAGCAATTGA TTTAGGCCAT GAAGCAAATA	17580
CCCTCTATCT AGCTTCCTAT CAAACAGCAG GCCGAGGCCG TTTTCAACGT TCCTTCTACT	17640
CACCACAAGG TGGTATTTAT ATGACACTCC ATCTTAAACC AAATCTCCCC TATGACAAAT	17700
TACCATCCTA CACACTACTT GTAGCTGGAG CTGTCTACAA AGCCATTAAAG AACCTAACTT	17760
TAATAGATGT CGACATAAAA TGGGTCAATG ATATCTATCT AAACAATCAT AAAATGGAG	17820
GAATCCTTAC TGAAGCAATG ACCTCTGTAG AAACTGGCTT AGTCACAGAT ATCATTTATTG	17880
GAGTAGGTAT CAATTTCACT ATTAAAGACT TCCCTCAGGA ATTAAAAGAA AAAGCTGCCA	17940
GCTTATTTAA AGCTACAGCT CCTATAACAA GGAATGAATT GATCATAGAA ATCTGGCGTG	18000
CTTCTTTCGA AACACCAGCA GAAGAGCTAT TATACCTATA CAAAAACAG TCATTCAATC	18060
TAGGAAAAGA AGTCACTTTC AACTAGAGC AAAAGACTA CAAGGGACTT GCTAAAGACA	18120
TCTCAGAAAA TGGAAAACCT TTAGTTCAAT GTGATAACGG AAAAGAAATC TGGCTAAATA	18180
GTGGCGAAAT TTCTCTCAAT AGTTGGAAGT AAAATAACAC AATTATAATA TAAACGATAT	18240
AAAAATAACT TCAGATTAGT AATTCAATTA AGTTTACGG ATCTGAAGTT TTATTGGCTC	18300
TAAAAATAAA AAAGAGAGTT ACAGACTCTC ATTAAAACGG AGAATAAGGG ATTCTGAACCC	18360
TTGCGCCAGT TACCCGACCT AACGATTTAG CAAACCGTCC TCTTCAGCCT CTTGAGTAAT	18420
TCTCCAATTA ATGGGCACGA GTGGACTCGA ACCACCGACC TCACGCTTAT CAGGCGTGCG	18480
CTCTAACCAC CTGAGCTACG CGCCCAAGTT AAAAACTTG GTAATTTGAA CAAAGTTCAA	18540
AGCGGGTGAC GAGAATCGAA CTCGCGACAA CAGCTTGGA GGCTGTAGTT TTACCACTAA	18600
ACTACACCCG CATAAATACT ATCAATAAAA TGGCGCGAGA CGGAATCGAA CCGCCGACAC	18660
ATGGAGCTTC AATCCATTGC TCTACCAACT GAGCTACCGA GCCTTATTGC GGGAGCAGGA	18720

762

TTTGAACCTA CGACCTTCGG GTTATGAGCC CGACGAGCTA CCGAGCTGCT CCATCCCGCG	18780
TTAATAATAT AAAAGGAGGA TGTGGGATTC GAACCCACGC ACGCTTTTAC ACGCCTGACG	18840
GTTTTC AAGA CCGTTCCCTT CAGCCGGACT TGGGTAATCC TCCAATATTC AAATGGACCT	18900
TGTAGGACTT GAACCTACGA CCACTCGGTT ATGAGCCGAG AGCTCTAACC AGCTGAGCTA	18960
AAGGTCGGAC AAGATCATTA TAGCGGCGAA GGGGATCGAA CCCCCGACCT CCCGGGTATG	19020
AACCGGACGC TCTAGCCAGC TGAGCTACAC CGCCATGAAT CGGGAAGACA GGATTCTGAAC	19080
CTGCGACACC TTGGTCCCAA ACCAAGTACT CTACCAAGCT GAGCTACTTC CCGAGTTAAA	19140
TAGAAAAATG CACCCTAGAG GAGTCGAACC TCTAACCGCC TGATTCGTAG TCAGGTA CTCTC	19200
TATCCAGTTG AGCTAAGGGT GCTCCATATT ATGCCGAGGA CCGGAATCGA ACCGGTACGA	19260
TCGTTACCAA TCGCAGGATT TTAAGTCTCG TGCGTCTGCC AGTTCCGCCA CCCC GGCCCTC	19320
TCTAAGCGAA CGACGGGATT CGAACCCGCG ACCCCACCT TGGCAAGGTG GTGTTCTACC	19380
ACTGAACTAC GTTCGCACTG TTTTCTTCTA TCTAAAAATG CCGGCTACAT GACTTGAACA	19440
CGCGACCCCTC TGATTACAAA TCAGATGCTC TACCAACTGA GCTAAGCCGG CTCATTTGTT	19500
ATATCTTAAT GCGGGTTAAG GGA CTTGAAC CCCCACGCCG TTAAGCGCCA GATCCTAAAT	19560
CTGGTGCGTC TGCCAAATTC GCCAAACCCG CATATATGAC CCGTACTGGG CTCGAACCAG	19620
TGACCCATTG ATTAAAAATC AATTGCTCTA CCAACTGAGC TAACGAGTCT AAAATAACTT	19680
GCGTTACCTT AAACGGTCCG ACGGAATCGA CCCGGTAC	19718

(2) INFORMATION FOR SEQ ID NO: 100:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4117 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

CCGTGGAAAA GTCTGGATAG TGAATGGTCT TCACACAATG ACCTGAAAGA AGCCTGAGAA	60
TAATTATGGA GAGTAGCATT CTGAGAGGTG TTAGCAGAAC CATATGACAG AGCTGTTTGA	120
AGAGGGAATA TTGAGGAGAA AAATCCTGAG CCTACCAGTT GGAGTTGGAA AGAGCTGACT	180
GT TAGATCAT GGT TTATTAT CCACAACCTG TGGATAACTT TGTGAATAAG AGAAGTTGCT	240
AAAGAAGGAG ATATATAACG ATGAAGAAAA TCAAACCGCA TGGACCGTTA CCAAGTCAGA	300
CTCAGCTAGC TTATCTGGGA GATGAACTAG CAGCTTTTAT CCACTTCGGT CCTAATACCT	360
TTTATGACCA AGAATGGGGG ACTGGACAGG AGGATCCTGA GCGCTTTAAC CCGAGTCAGT	420

763

TGGATGCGCG TCAGTGGGTT CGTGTGCTCA AGGAAACGGG CTTCAAAAAG TTGATTTTGG	480
TGGTCAAGCA CCACGATGGC TTTGTCCTTT ATCCGACAGC TCACACAGAT TATTCGGTTA	540
AGGTCAGTCC TTGGAGGAGA GGAAAGGGCG ACTTGCTCCT TGAAGTATCC CAAGCTGCCA	600
CAGAGTTTGA TATGGATATG GGGGTCTACC TGTCACCGTG GGATGCCCAT AGTCCCCTCT	660
ATCATGTGGA CCGAGAAGCG GACTACAATG CCTATTATCT GGCTCAGTTG AAGGAAATCT	720
TATCAAATCC TAACTATGGG AATGCTGGTA AGTTCGCTGA GGT'TTGGATG GATGGTGCCA	780
GAGGAGAGGG CGCGCAAAAG GTTAATTATG AATTTGAAAA ATGGTTTGAA ACCATTTCGTG	840
ACCTGCAGGG CGATTGCTTG ATTTTTCCTCA CAGAAGGCAC CAGTATCCGC TGGATTGGCA	900
ATGAACGAGG GSTATGCAGGT GATCCACTGT GGCAAAAGGT GAATCCTGAT AAACTAGGAA	960
CAGAAGCAGA GCTGAATAT CTTCAGCACG GGGATCCCTC GGGCACGATT TTTTCAATCG	1020
GAGAGGCAGA TGTTTCCATC CGTCCAGGCT GGTCTACCA TGAGGATCAG GATCCTAAGT	1080
CTCTCGAGGA GTTGGTCGAA ATCTACTTTC ACTCAGTAGG GCGAGGAACT CCACTCTTGC	1140
TTAATATTCC GCCGAATCAA GCTGGGCTCT TTGATGCAAA GGATATTGAA CGACTTTATG	1200
AATTTGCGAC CTATCGCAAT GAGCTCTATA AAGAAGATTT GGCTCTGGGA GCTGAGGTAT	1260
CTGGTCCAGC TCTTCCGCA GACTTTGCTT GTCGCCATTT GACAGACGGC CTTGAGACCA	1320
GCTCTTGGGC AAGCGATGCA GACTTGCCCA TCCAGTTAGA ACTCGACTTA GGTTCCTCTA	1380
AACTTTTGA TGTAATTGAG TTAAGAGAAG ATTTGAAGCT AGGGCAACGA ATCGCTGCTT	1440
TTCATGTGCA AGTAGAGGTG GATGGTGTCT GGCAGGAGTT TGGTTCGGGT CATACTGTTG	1500
GTACAAACG TCTCTTACGA GGAGCAGTTG TTGAGGCACA GAAGATACGT GTAGTCATTA	1560
CAGAATCACA GGCTTTGCCT TTGTTGACCA AGATTTCCTT TTATAAACT CCTGGATTAT	1620
CAAAAAAGA AGTTGTTTCA GAACTAGCAT TTGCAGAAAA AAGCCTAGCT GTGGCAAAGG	1680
GAGAAAATGC CTATTTTACA GTTAAGCGCA GAGAATGTAG TGGTCCTTTA GAAGCTAAGA	1740
TTTCGATTCA ACCGGGGACA GGTGTCCATG GTGTGCGCTA TCAGGATGAG ATTCAAGTCC	1800
TTGCGTTTCA AACTGGTGAG ACTGAAAAAA GTCTGACGCT ACCAACCTTG TATTTGCGAG	1860
GAGATAAAAC CTTGGATTTC TATCTGAACC TAACGGTGGA TGCTCAGCTT GTGGATCAAC	1920
TTCAAGTCCA AGTTTCATAA AAGAAGAACC TTTGCGCGAT GCAAAGGTTT TTTTGGTTAT	1980
TAGTGACTTG GTAACAGCT GAGGGTGAAA GTTAGTTGTT CAGCTTTTAA GAGGTCTTGG	2040
TGTTGAATAG TTGATACGAG TGTTTTGTCC AGTCGGCATT CTTTGACAAA GTTAAATGG	2100
TTGTGGTTTT GTTTAGTATG GATATCCAGC CATTTATCTT CTTTAGCGAG GTAGACTCGT	2160

764

AGATGGTCAA AGAGAGGGAT TCCGAGGTCA TAGCTTGGTT TTCCTGGACA GGTGGATAA	2220
AATCCGAGAG CTGACCAGAT GTACCAAGCA GAGAGACTAC CATTGTCTTC ATCTCCAGGA	2280
TAGGCTTCCC AACTTGGGTG AAAAGCTTTC TGACGGAGCG TCTTGATAAG AAGGGCAGTG	2340
TAGTCAGGGT AATCGCTGTA ACGGAAGAGA TAAGGAATGT GGAAACTAGG CTGGTTGGAA	2400
ATGGCTATTT GTCCAAAAGG AGCAGTAGCC ATCTCGCTCA TTTCGTGAAT TTCGTAACCA	2460
TAGCCTGTTG TTTCAAAGAG GGGAGCATCT TGACAGGCTT TCAAAAGATA GTTGCTAAAG	2520
GTTTCTTTTC CACCCATCAG TTGGATTAAAG CCAGGGATGT CGTGGAGAAC GCCTAAAGTA	2580
GCTTGAATGG CAGAGCATTC AGCGTAGTCT CGCCCCAAC TATAAGGAGA GAAGTCAGGG	2640
TGAAAGTTTC CTTGATTGTC TCGTGCTCGC ATGTAACCTG TCTCAGCGTC AAATAGCTGG	2700
CGGTAATTTT GTGAAGCAGC CTTGTAGGTT TCAGCGATTT CTATGTTCTC TAGTTTTTTG	2760
GCACAGCTGG CGATACAAA GTCACATATAG GCATAGTCTA GAGTATGGCT AACACTTTCG	2820
TGGTGGTCCG TAGAGAGGTA ACCTAGTTCT TGGTATTGGG CTAGTCCGTG GCGGCCATTG	2880
ATGCCGAGAG GGTCCGCTTT GCTGGCTGTT TCGAGCATGG CTTGGAAGAG TTCTCCTCT	2940
AGGTCGGGGG TCATGTCCTT GCAGGCGCTA TCTGCGATAA TACCGCTAA AAGTGACCT	3000
GGCATCATAC CCCGTTTCATC TGGAGCCAGC CATTTTGGAA GGAAACCAGT ATCGCGGTAG	3060
CTATTGAGGA AACCTTCTAA AAAGCGTTGA TAGTGCTCCG GTATGATAAG GGCAAAGAGG	3120
GGGAAGGTGG TGCGGAAGGT ATCCAGAAA CCATTGTTGC TAAAGAGGAC ACCAGGCTTG	3180
ACAGTACCAG TAGCCAGATC CATGTGGATG GCTTGCCCTG ATTCATTAAT CTCATAAAAA	3240
GTCTGTGGGA AGAGGAAGAG TCTGTAGAGG CAGTGGTCAA AGAAGGTTG GTCAGCCTCT	3300
CCTGTCTCTA TAATGTCAAA ACGATGGAGG AGATTTTCCC AATCCACTTG GGCACCTGAT	3360
TTACAGCTAT CAAAATCTTC TTGAGGTAGA TTGATTAGAG CTTGAGAAGG AGAGATGAAA	3420
GAAGTGGCTA GTTGCACTC GGTGACTA CTTGCTAAGT CAATTCGCCA GTCTCCAGCT	3480
TCTTGGCTGA TAGCAAGAAT ATCCGTGTTT ATTTGCAGGG CAGTGAACAT CGTTAGCGAA	3540
TTTTTGTTAG TTTCAGTTT ACCTTCTTGT CGCAGGGCAA GAGTCCGCTT ATCTACTTGC	3600
TCTACTGTCA GTTCATCTGC TGCCTGAAGA TAGAGGGAGA GGGCTTTGCC TTGCTTTTGA	3660
TTCAAACGAA TAGAAGCACC ATAGCAAGTC GGTGTGAGCT GGGTTTCAAT CTGATAACGC	3720
AGAGAAAAGA GCTTCAAATA GTGAGGCTGG AAGCAAGCTT TATCTATATC ATAAGAAGAC	3780
TGGCGGTGAA AGAGGCTGTC TCCCCCAGT TGAAGTGTGA CAGGTGTCAG AAGGAGCCAA	3840
GAGTAGTCCC CAATCCAAGG ACTGGGCTGG TGAGTTAATC GAATCCCCTG AAAGATAGGC	3900
AGATGTGGAT CAAAAACCA AGATCCATCC TGGTCACTGG TCTGGGGCAC AAAGTAATTC	3960

765

ATCCCAAAAG GCACGCCTGT GTATGGCAGG GTATTTCCCC GAGAAAAGGC ATGCTTGTTC	4020
GTAGTTCCAA AACGGGTATC GATGGTATCA AGTAGTGGTT TCATAGTCTT TCCTTTAGCT	4080
GTTTTCTAC ATTATATCAG TAATAGAGGG CCTTTAG	4117

(2) INFORMATION FOR SEQ ID NO: 101:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2727 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

CTGGTTCAAT TATTATTCAC TCTAAGTAGT CATATGTTCT TTATTTATGT GAGTTTTTAC	60
CTTTTAAAGG ATCTTGTTAG ATGGGAGAAG GTTTTAAAAG TGACAGATGA TAATACAAGA	120
AAAGTTCGTT TATTAGTAGC CTTTTTTAGC ATTGTCATAG GCTACATCCT GAGTTCCTTC	180
TTTATTAGCC TGTATCATTT GTGGCAAGAA GCGCTTAGAG GATTATTATG AAATCAAGAG	240
TAAAGGAAAC GAGTATGGAT AAAATTGTGG TTCAAGGTGG CGATAATCGT CTGGTAGGAA	300
GCGTGACGAT CGAGGGAGCA AAAAATGCAG TCTTACCCTT GTTGGCAGCG ACTATTCTAG	360
CAAGTGAAGG AAAGACCGTC TTGCAGAATG TTCCGATTTT GTCGGATGTC TTTATTATGA	420
ATCAGGTAGT TGGTGGTTTG AATGCCAAGG TTGACTTTGA TGAGGAAGCT CATCTTGTC	480
AGGTGGATGC TACTGGCGAC ATCACTGAGG AAGCCCTTA CAAGTATGTC AGCAAGATGC	540
GCGCCTCCAT CGTTGTATTA GGGCCAATCC TTGCCCCTGT GGGTCATGCC AAGGTATCCA	600
TGCCAGGTGG TTGTACGATT GGTAGCCGTC CTATTGATCT TCATTTGAAA GGTCTGGAAG	660
CTATGGGGGT TAAGATTAGT CAGACAGCTG GTTACATCGA AGCCAAGGCA GAACGCTTGC	720
ATGGTGCTCA TATCTATATG GACTTTCCAA GTGTTGGTGC AACGCAGAAC TTGATGATGG	780
CAGCGACTCT GGCTGATGGG GTGACAGTGA TTGAGAATGC TGCGCGTGAG CCTGAGATTG	840
TTGACTTAGC CATTCTCCTT AATGAAATGG GAGCCAAGGT CAAAGGTGCT GGTACAGAGA	900
CTATAACCAT TACTGGTGTT GAGAACTTC ATGGTACGAC TCACAATGTA GTCCAAGACC	960
GTATCGAAGC AGGAACCTTT ATGGTAGCTG CTGCCATGAC TGGTGGTGAT GTCTTGATTC	1020
GAGACGCTGT CTGGGAGCAC AACCGTCCCT TGATTGCCAA GTTACTTGAA ATGGGTGTTC	1080
AAGTAATGA AGAAGACGAA GGAATTCGTG TTCGTTCTCA ACTAGAAAAT CTAAAGCTG	1140
TTCATGTGAA AACCTTGCCC CACCCAGGAT TTCCAACAGA TATGCAGGCT CAATTTACAG	1200

766

CCTTGATGAC	AGTTGCAAAA	GGCGAATCAA	CCATGGTGGG	GACAGTTTTC	GAAAATCGTT	1260
TCCAACACCT	AGAAGAGATG	CGCCGCATGG	GCTTGCATTC	TGAGATTATC	CGTGATACAG	1320
CTCGTATTGT	TGGTGGACAG	CCTTTCAGG	GAGCAGAAGT	TCTTTCAACT	GACCTTCGTG	1380
CCAGTGCGGC	CTTGATTTTG	ACAGGTTTGG	TAGCACAGGG	AGAAACTGTG	GTCGGTAAAT	1440
TGGTTCACCT	GGATAGAGGT	TACTACGGTT	TCCATGAGAA	GTTGGCGCAG	CTAGGTGCTA	1500
AGATTACCGG	GATTGAGGCA	AGTGATGAAG	ATGAATAAGA	AATCAAGCTA	CGTAGTCAAG	1560
CGTTTACTTT	TAGTCATCAT	AGTACTGATT	TTAGGTACTC	TGGCTCTAGG	AATCGGTTTA	1620
ATGGTAGGTT	ATGGAATCTT	GGGCAAGGGT	CAAGATCCAT	GGGCTATCCT	GTCTCCAGCA	1680
AAATGGCAGG	AATTGATTCA	TAAATTTACA	GGAAATTAGG	CTGGAGAACC	AGCCTTTTTC	1740
TAAAGATAAG	GAGAAATATG	AACAAAAAAA	CAAGACAGAC	ACTAATCGGA	CTGCTAGTGT	1800
TATTGCTTTT	GTCTACAGGG	AGCTATTATA	TCAAGCAGAT	GCCGTCGGCA	CCTAATAGTC	1860
CCAAAACCAA	TCTTAGTCAG	AAAAACAAG	CGTCTGAAGC	TCCTAGTCAA	GCATTGGCAG	1920
AGAGTGCTCT	AACAGACGCA	GTCAAGAGTC	AAATAAAGGG	GAGTCTGGAG	TGGAATGGCT	1980
CAGGTGCTTT	TATCGTCAAT	GGTAATAAAA	CAAATCTAGA	TGCCAAGGTT	TCAAGTAAGC	2040
CCTACGCTGA	CAATAAAACA	AAGACAGTGG	GCAAGGAAAC	TGTTCCAACC	GTAGCTAATG	2100
CCCTCTTGTC	TAAGGCCACT	CGTCAGTACA	AGAATCGTAA	AGAAACTGGG	AATGGTTCAA	2160
CTTCTTGGAC	TCCTCCAGGT	TGGCATCAGG	TCAAGAATCT	AAAGGGCTCT	TATACCCATG	2220
CAGTCGATAG	AGGTCATTTG	TTAGGCTATG	CCTTAATCGG	TGGTTTGGAT	GGTTTTGATG	2280
CCTCAACAAG	CAATCCTAAA	AACATTGCTG	TTCAGACAGC	CTGGGCAAAAT	CAGGCACAAG	2340
CCGAGTATTC	GA CTGGTCAA	AACTACTATG	AAAGCAAGGT	GCGTAAAGCC	TTGGACCAAA	2400
ACAAGCGTGT	CCGTTACCGT	GTAACCCCTT	ACTACGCTTC	AAACGAGGAT	TTAGTTC CCT	2460
CAGCTTCACA	GATTGAAGCC	AAGTCTTCGG	ATGGAGAATT	GGAATTCAAT	GTTCTAGTTC	2520
CCAATGTTCA	AAAGGGACTT	CAACTGGATT	ACCGAACTGG	AGAAGTAACT	GTA ACTCAGT	2580
AAAAGATACG	CCTACACTCC	TATGTCACTT	ATGGATGTAG	GAGTTC TTTT	TACTAGTTTA	2640
AGCAGGACTA	AGACAGGTAC	TAAGACAAAA	TAGCAACTTC	TAAA ACTAAC	TTCCAGTTTT	2700
GGGAGAGAGA	TGGAAGTTAC	TTTGAGA				2727

(2) INFORMATION FOR SEQ ID NO: 102:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 5717 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

767

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

TTTTTTGTAG ATTTAAGTGG GGTGCAATTC CTAAAAATA AAAACAATT TTTGAAAATT	60
ATGTTAGCAG GAATTGCTTC AAATTCGATT TTATCACTTA CAGGTTTACT TGTTTTATTG	120
TTCACATCGT ATAAATTGCT TGGACTCTTA TTTTATCA TTAACCTAGG TATGATTTT	180
ATTAATTCAA TTCCTTTTTT TCAGTATGAT AGTGGTATTA TTTTAAGATA CTTGAATTCT	240
AACAATAATA ACTTGAATTT TCAATATATA GTTCAACTTT TAATAGCATT TGTATTATT	300
TATTTTCCTT TGAGTCAACT ATTACAGTTT TTGACACCA ATATTATTGT TCGTAGTATA	360
GGAGGGGTGG TTGTTTCTAT ACTGCTTCT ATATTATATA TGATAGGAAG GACGAAATAT	420
GTTCTACGTA AATAGTTATG TTTTGTCTTA TAAAAAGAA GGTATAATGT ATTTACGTGG	480
TCGGAGTATG CGGGAATAG CTATAGAACC TCAAAATTCG CAAGAATTTA TCAACGATCT	540
ATTTAATAGT TGTAAGGAAC TATTAGAGAT AGAAGAAGTA TTAGGCAGTA AACTAACATT	600
TGAACTATAA ATGAACAAAT TTTAATTTCG GATGAGATAG ATATTGATAG TAGATATTCT	660
AGAACTAAAG GTTACTATTC GTTATTTTAT AATGAAGAGT ATAATAAAAT ACAGAATAAA	720
ACAGTATTAG TATTAGGAGC AGGAGTCTTA GGATGTTATA TATCTCTAAG TCTAAGTATG	780
TATGGAGTGA GGAACTTAT TGTCGCTGAT TACGATATAA TAGAACCATC AAATTTAAAT	840
AGGCAAATTC TTTATACAGA GTCGGATGTT GGTAAGGAGA AGATTAATGT TCTTCTGAA	900
AAAATACACA AGTATAATTC AGATGTTTCAG GTAGTACCTA TTTCTATTAA AGTTTCTTCA	960
GTAGAAGAAT TAGAAAAAT TGTTGCGGAA TATGGGAGTA TAGATTTTAT CGTTAAAGCA	1020
ATTGATACGC CCATTGATAT TATAAAAATT GTCAATCAAT TTGCTGTATC GCATAAGATA	1080
TCCTACATAT CAGGAGGGTT TAATGGATGC TATCTTATTA TTGATAATAT ATATATCCCT	1140
ACCATCGGTT CTGCTTTGG TTGTCGGAAT ATAAACAAAG ATATAAATAA GTACACTTTA	1200
TCTGATAAGA CAAAGTGGCC GACTACACCA GAGATGCCTG CTATTTTGGG AGGGATAATG	1260
ACTAATTTAA TAATTAAAT ATTCTGGGA TGTATAATG AAATCCTAAT AGATAACGCT	1320
TACGTTTATA ATATGAGAAA TCATGCTCTA AGTCAAGAAA AATATGTTCT GGAAAACGGA	1380
GAATGTCCAA TTTGTAAAAA AATAATAAAG TGAAAGATAA CAATATTAGA GCGAAAACAT	1440
TTATTCGTTT AGTTTGTTTT TGCTTATTAT CAGGAGGAGT AGCTTTTTTA TCTGCTATTG	1500
GGCAGTTCAC TGTATAGAA ACACAATTAA TAGTATTGTT CTTGGGTATT ATTTTGTCTA	1560
TATATTATGC TTAATACAAT AAAATATTC AAACATCATT GGAAAATATA GTATGGCTTT	1620

768			
TTTCATCGTT	TGAGATTTTA	TTTTTGCTTG	TTAATTTTAG AACATTTATT CAGTTACCAG 1680
TGGATATTTT	TATTGGTATG	ATAATATTTT	TAATGCTGTG GATATTTATT ATGTTAGGTA 1740
TAGTGTGTCT	TAGTTATTAT	ATAACTTTAT	TATTTAGCAA GGAGGCTTAG TATGTTTAAA 1800
AAAATAGGTA	TAATGAGCAT	TTGCAATAT	ATAATTTATT TATACTGCTT GAGAATGTAT 1860
CGTATTATCA	ATAATATTGA	AACAATCTTG	CTAACGGTTA TATGCTTAAT GTTATTGTTT 1920
TTTTTAAGAC	GTTTATTTGA	TAAAGATAAG	TAAATAGATG TTAAGTAAAA ATGTAGAATA 1980
TAAAGGAGGT	GCAATGAGTA	TGATTGAAGT	TAGCCATTTA TCAAAAAGTT TTGGTGATAA 2040
AATAGCTTTA	AATAATATAA	GCTTCACTGT	TAAAGAAGGT TAGATTTTTG GATTTTTAGA 2100
ACCATCTGGT	TCTGGAAGA	CCACAACGAT	TAATATTCTG ACTGGGCAGT TCCTTGCCGA 2160
TAAAGGACAA	TCTATTATTT	TGGGACAAAA	ATCTCAAAAT TTAACAAGCG GTGAATTAAA 2220
GAGAATTGGA	TTGGTTAGCG	ATACAAGTGG	ATTTTATGAG AAAATGTCTC TGTATAACAA 2280
TCTTCTTTTT	TATAGTAAAT	TTTATAATAT	TAGTAAATCA CGTGTTGATA ATTTGTTAAA 2340
GCGAGTAGGA	TTATATGATA	GTCGCAAGAT	GGTAGCAGGA AAATTATCCA CTGGAATGAG 2400
GCAACGAATG	CTTTTAGCAC	GAGCTCTTAT	CAACAACCCC GCTGTACTCT TTCTGGATGA 2460
ACCGACCTCA	GGTCTAGATC	CCACAACCTC	TCGAACAATT CATGAGTTAA TTTTAGAATT 2520
GAAAACAGCA	GGGACAACGA	TTTTTCTAAC	GACTCATGAT ATGAATGAAG CAACTCTTTT 2580
ATGTGATTAT	GTGCTTTAT	TAAATAAAGG	GAAATTAGTT GAGCAAGGAG CTCCTTCTGA 2640
ACTCATTCAA	AGATATAATA	AAGATAAAAA	GATTAAGGTT ACAGATTATA ATGGGAATCA 2700
GATAACTTTT	GATTTTACAT	CACTAGAACA	GGTATCTCAG ACTGATCTGG AAAATATTTT 2760
TTCAATTCA	TCATGTGAGC	CTACTTTAGA	AGATATTTTT ATCACATTAA CAGGAGGAAA 2820
GCTAAATGCT	TAAACGGTTT	CTGGCTTTGG	TATGGTTGCG TTGTCAAATC ATCCTTTCCA 2880
ATAAGAGTAT	TTTATTGCAA	GTTTTAGTGC	CTTTTGCTTT CACATATTTT TATAAATATC 2940
TTATGGAAAC	ACAGGGAAG	GTCAACGATC	AACAGGCATT AGTCTTTTG ATGATGTGTT 3000
TACCTTTTTC	TTTTTCTTTG	GCTGTTGGAA	GTCCTATAAC TATTATCTTG TCTGAAGAAA 3060
AAGAAAAGTA	CAATTTACAA	ACTCTTCTGT	TGAGTGGTGT TAAAGGCTCC GAATACATTT 3120
TATCAACTAT	GTTTCTTCCT	TTTTTGCTAA	CTTTTGATAT TATGGGAACT ACTCCTCTTA 3180
TTTTAGGAGT	TACAATTGTA	CATACTTTTA	ATTATATTAC AATCGTCTTT CTAACCTCTT 3240
TATCCATCAT	TTTATCTTAT	TTATTGATAG	GTTTAACCGC GAAGAGCCAA GTAGTAGCTC 3300
AGGTATATCAG	TCTTCTGCT	ATGATTTTAG	TTGCTTTCTT ACCGATGCTA TCTGGTTTGG 3360
ATAAGACAGT	TGCGAAGATA	ACAGATTATA	GTTTTATGGG ACTATTTACT AAGTTTTTCA 3420

769

CAAAATGGGA GGAATTTTCA TGGAATAAAA CTCTAATTC TAATCTAACA CTACTTATTT	3480
GGATTGTTCT TCTATTAAC TTAATTACGA TAACTATTAG GAAAAAGAAA ATTTCTTAAT	3540
TGAGTTATTT TAATGATTAT AAACACAAGT GGAAGGAAA AAATGAAGT ATCTTTTGA	3600
CAGCAATTCT ACAGAATAGT CTTATTGCTA TATTTTGATT TGAGTGACG AAAAAAGAAA	3660
AATAACAATA GTGCTCATA TAATTGCAGA AGTTTGGGT GATAAGATAA CTGATAAATT	3720
GCAATAAAAA ATGCAACATT TTAAATCTC CTCTATAAGT GCTTCAAAA GTGCTTCAAA	3780
ACCTGTCTTG TAATCCAAGT ATTTTGGGG ACGGTGATTA ATAAGCTAGC AAAGCATCAT	3840
TAAGGATTTT TTCGGTAATT GTTGCCAAAT CGGTTTAA GAATACTCAC GAAGAAGTCC	3900
ATTCGCATTC TCATTACTTC CCCTTTGCCA AGATGAATAG GCATCCGCA AATAAACAG	3960
AATTCACATT TGTCAATTA AAGGTAACA AGCAACTCT TTTCTCTGT CCGAAGTGAA	4020
AGTCTTAACT TATCTTTTG GAAAGAGTCT TGTGAGGTGT TCAATAGCAG TCAACATGGA	4080
TTTAGCTGTT TTTACTTGAC AAGTGCTAGT AGAAATAATA GAATAGTAAA AAACCTTTAA	4140
AGCAGTCCAG AGAGGCAGCT AAGGTTAGAC GGTGAAAGG TGAGACTAC CCATTTTTCG	4200
TGGAACCTTG CTGTTGGCAG GTTCCTTTT TCGTGGCTTC TGTGGCCAG ACTCTCTAC	4260
TAGTAAAGGT AAAAGGAGAA ACCTATGCGA GAACATCGTC CAATCATTC TCTTGATTTT	4320
CCTAGTTTGT AGGCGGTCAA GGAATTTTTA GCTCTTTTCC CAGCAGAAGA AAGCCTTTAT	4380
CTCAAGGTAG GGATGGAGCT TTATTACGCA GCGGGGCTG AGATTGTGTC CTACTTAAAA	4440
GGTTTGGGTC ATAGTGTCTT TTTGGATCTC AAACCTCATG ACATTCTTAA TACAGTCAAG	4500
TCAGCCATGA AGATCTTGTC TCAGCTTGGT GTCGATATGA CTAATGTCCA TGCGGCTGGT	4560
GGTGTAGAGA TGATGAAGGC GCGCGTGAA GGTCTTGGGA GTCAAGCCAA ATTGATCGCT	4620
GTAATCAGC TCACATCAAC GTCAGAAGCT CAGATGCAGG AGTTTCAAAA TATCCAAACC	4680
AGTCTGCAAG AGTCTGTGAT TCACTATGCC AAGAAGACAG CTGAAGCTGG CTTGGATGGT	4740
GTGTTTGGCT CGGCTCAGGA AGTACAAGTC ATCAAGCAGG CTACCAATCC AGATTTTATC	4800
TGTCTGACAC CAGGGATTCTG TCCAGCTGGT GTTGCAGTTG GAGATCAAAA ACGAGTCATG	4860
ACACCTGCTG ATGCTTATCA AATCGGCAGT GACTATATCG TAGTGGGACG TCCATTACC	4920
CAAGCTGAGG ATCCTGTGTC AGCTTATCAT GCCATCAAG ATGAATGGAC ACAGGACTGG	4980
AATTAAAGAA CTAGATTAGA AAAATAAAG GAGAATACCA TGACACTTGC TAAAGATATC	5040
GCTAGCCACC TCTTGAAAA CCAAGCCGTT TACCTCAAAC CAGAGGAACC CTTCACTTGG	5100
GCATCTGGTA TCAAGTCACC GATTTACACT GATAATCGTG TGACACTAGC CTATCCAGAA	5160

770

ACTCGTACCC TAATTGAAAA TGGTTTGTG GAAGCTATCA AAGAAGCCTT TCCTGAAGTA	5220
GAAGTGATTG CAGGAACTGC AACAGCAGGG ATTCCACACG GAGCCATTAT TGCTGATAAG	5280
ATGGACTTGC CTTTTCCTA CATCCGTAGT AAACCAAAAG ACCACGGAGC TGGTAATCAA	5340
ATCGAAGGTC GCGTAGCTCA AGGTCAAAAA ATGGTAGTGG TTGAAGACCT TATTTCAACG	5400
GGTGGTTCAG TTCTTGAAGC TGTAGCAGCA GCCAAGCGAG AAGGAGCAGA TGTACTTGA	5460
GTTGTAGCGA TTTTCAGCTA CCAATTGCCA AAAGCAGATA AGAACTTTGC AGATGCTGGT	5520
GTAAACTTG TGACGCTTTC AAATATAGC GAGCTTATCC ATCTAGCCCA AGAAGAAGGT	5580
TACATCACGC CAGAGGGCCT TGATCTTCTA AAACGCTTTA AAGAAGACCA AGAAAATTGG	5640
CAAGAAGGTT AGGTCAGTAA GATAAAGAGA GACGAGGCTA CCGAGTCTCT TTTACCATTT	5700
TATTTAAAT ATGACAG	5717

(2) INFORMATION FOR SEQ ID NO: 103:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5558 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

CCTGGACTTT CTAAATGAA ATCTTGCAC CTGGATCAAG CCCTTCATGA GCATTTTCA	60
GAAGAAGAT TAGCTGGTCA CTTTCATGTC CTTCTATGGA CTTTTTTTAC AATGGCATTG	120
CTATCACACC CAATACCTAT CTAAGCGCCT GGTCGTAAA CTTTATGCA GCTCTTCCTC	180
TAAATTCCT AATTGTTGAA CCAATTGCC GTTTTATACT AAGTCTTTT CAGAAACCAT	240
TTACTGGGA AGAAGTTGAA GATTTTCAAG ATGATGATGA AATCCCACT ATTATCTAAG	300
CCAGTCTGT AAACACTAA TATTTGAAAT CCACTTCCTT TTAGGGTGCA ATGGTTATAA	360
ATGAATTTT GAGAGGATCA GAATGAAAA ACTAGCAACC CTTCTTTTAC TGTCTACTGT	420
AGCCCTAGCT GGGTGTAGCA GCGTCCAACG CAGTCTGCGT GGTGATGATT ATGTTGATTC	480
CAGTCTTGCT GCTGAAGAAA GTTCCAAAGT AGCTGCCCAA TCTGCCAAGG AGTTAAACGA	540
TGCTTTAACA AACGAAAACG CCAATTTCCT ACAACTATCT AAGGAAGTTG CTGAAGATGA	600
AGCCGAAGTG ATTTTCCACA CAAGCCAAGG TGATATTCGC ATTAACTCT TCCCTAACT	660
CGCTCCTCTA GCGGTTGAAA ATTTCTCTAC TCACGCCAAA GAAGGCTACT ATAACGGTAT	720
TACCTTCCAC CGTGTCTCG ATGGCTTTAT GTCCAACT GGAGATCCAA AAGGGGACGG	780
TACAGGTGGT CAGTCCATCT GGCATGACAA GGATAAGACT AAAGACAAAG GAACTGGTTT	840

771

CAAGAACGAG ATTACTCCTT ATTTGTATAA CATCCGTGGT GCTCTTGCTA TGGCTAATAC	900
TGGTCAACCA AACACCAATG GCAGCCAGTT CTTTCATCAAC CAAAACCTCTA CAGATACCTC	960
TTCTAAATC CCTACAAGCA AGTATCCACA GAAAATTATT GAAGCCTACA AAGAAGGTGG	1020
AAACCCTAGT CTAGATGGCA AACACCCAGT CTTTGGTCAA GTGATTGACG GTATGGATGT	1080
TGTGGATAAG ATTGCTAAG CCGAAAAAGA TGAAAAAGAC AAGCCAACTA CTGCTATCAC	1140
AATCGACAGC ATCGAAGTGG TGAAAGACTA CGATTTTAAA TCTTAAAAAC CAAAAAATA	1200
CAGTATCCAC ATTTCGGTACT GTATTTCTTT TACTCTCATT CTTAAGTTAA ATTATTAAAA	1260
TCCCATATTT GGTCTATCCA GCCTTCATAA AAGTCTGGCT CGTGGCAGAC CATAAGGATA	1320
GATCCCTTAT ATTCTTTGAG AGCGCGTTTG AGCTCATCCT TTGCATCCAC ATCCAAATGG	1380
TTGGTCGGCT CGTCCAGCAC TAAACGTTG TTTTCACGAT TCATCAAGAG ACAGAAACGA	1440
ACCTTGCGTT GCTCTCCCC TGATAATACT TGAATCTGGC TTTCAATATG TTTGGTTGTC	1500
AAACCACAAC GGGCAAGGCG TGCACGGACT TCTGCTTGAT TAAGGCGAGG AAAGGCATTC	1560
CAGACAGCTT CAAGAGGAGT TTGGCGATTA CCGCCTTCTA CTTCTGTGTC AAAATAACCA	1620
AGTTCTAAAT AATCTCCAG CTCCACTTCC CCAGCGATTG GCGAGATAAT GCCCAAGAGA	1680
CTCTTCAAGA GAGTTGTTTT TCCAATACCA TTAGCACCAA TAATCGCAAC CTTTGTGATTG	1740
CGTTTGAAGG TAAGATTTAA AGGCTTAGTA AGAGGACGGT CGTAACCAAT TTGCAAGTTC	1800
TTGGCTTGA AGATAAAGCG CCCTGGTGTA CGAGCTGGT TGAAATCAAA GGATGGTTTT	1860
GGTTTCTCAC TTTGGAGTTC GATAATATCC ATCTTATCCA ATTTCTTTTG ACGAGACATA	1920
GCCATATTAC GAGTTGCAAC ACGGGCTTTA TTACGAGCCA CAAAGTCCTT GAGGTCTGCA	1980
ATCTCTTTCT GCTGGCGTTC GTAGGCTGCC TCTAGCTGAG ATTTCTTCAT AGCATAACT	2040
TCTTGGAAC TGTAGTAGTC ACCAGAGTAA CGCGTCAGCT GTTGATTTTC CACATGATAG	2100
ACAATATTAA TAACGTCATT GAGGAATGGA ATATCGTGCG AAATGAGAAC AAAGGCATTC	2160
TCATAGTTTT GGAGATAGCG CTTGAGCCAA TCAATATGCT CAGCATCCAA GTAGTTGGTC	2220
GGCTCGTCCA ACAGCAAGAT ATCAGGCTTT TCAAGGAGAA GTTTTGCCAA AAGCACCTTG	2280
GTTCTTTGCC CACCTGACAA AGAAGTTACA TCCGTATCCA TGCCAAAGTC CATAACACCA	2340
AGAGCACGCG CTACTTCGTC AATCTTAGCA TCCAAGGTAT AGAAATCACG ACTCTCCAGA	2400
CGGTCTTGAA GTTCTCCTAC TTCTTCCATG AGAGCATCAA CATCCGCGCC GTCTTCAGCC	2460
ATTTTCATAT AGAGGTCATT GATACGAGCT TCAGCTTTGA AAAGCTCATC AAAAGCCGTA	2520
CGGAGAACAT CACGCACCGA CTGTCTTTCA GCAAGGACAG AGTGCTGATC CAAGTAACCA	2580

772

GCCGTCACAT	ATTTGGACCA	CTCAACCTTT	CCTTCATCTG	GCAGCATTTT	ACCAGTCACG	2640
ATACTCATAA	AGGTTGATTT	TCCTTCACCA	TTGGCACCGA	CCAGGCCGAT	ATGTTCTCCC	2700
TTGAGGAGAC	GGAAGGACAC	ATCTTCAAAA	ATTGCACGGT	CACCAAAACC	GTGACTCAGA	2760
TTTTTAACTT	CTAAAATACT	CATTTTAATT	CCTTACCTTG	TTTTTATGTA	ATCGTTTATA	2820
AAGGAGCCAA	GCCAGATAGC	CACCCAAAGT	GTTGGTCCAC	AAATCATCAA	TCTCAAAGAC	2880
GCGATTGAAA	TCAAAGAAAA	AGTCCAAGAT	TAATTGCGTA	CACTCGATTG	CAAGACTCAC	2940
AAGAAACTA	AAAAGAAGGA	CCTTTTTTGT	TTTCCGCAAA	TTTGGAAATA	GATAAAGGAG	3000
TTGAAAAATC	AGAGGAAAAA	ACAAGAAGAC	ATTGAGGATA	TTTTGTAAAA	AAATCCAACA	3060
TAATTGTCCA	ATGTCACTCA	CTTCGCCAG	TTTCCAGAGA	GAATTGAAAG	GAGTCAAAAG	3120
AAAAACCAGG	CGTCCAAGAT	GCTGAATACC	TGGAGTTCCC	ACTCCACGG	TAGATTGTTT	3180
TTGAGGAGTA	AAGCAAAAAC	AGACAATGCA	AATGCTATAG	AAAATGACTC	CCCAGACCRA	3240
AATATGATTA	TAAGTCTTCT	TCATCATTA	GGATTTACCG	CTGCGACTGC	CTTCTGGCGG	3300
TCACGTTTCA	TTGTGTTAGA	GCGCAATTGT	CCACAAGCTG	CGTCAATATC	TGTACCATGC	3360
TCTTGACGAA	CCACACAGTT	GACCCCTTTT	TTCTTAAGCG	TATCATAGAA	AGCCAACACG	3420
CACTCTTTGG	GACTACGGCT	ATATTGGTCA	TGCTCACTAA	CTGGGTTATA	AGGAATCAAG	3480
TTTACATAAG	ACAATTCTTT	GATGTTCTTG	AGCAATTGAG	TCAATTCCAA	GGCTTGTTCT	3540
ACACCGTCGT	TGACTTCATT	AAGCATGATA	TATTCAAAGG	TTACACGACG	GTTTGTGTC	3600
TCAATGTAGT	ATTCAATAGC	AGCAAAGAGT	TTTTCAATCG	GAAAGGCACG	GTTAATCTTC	3660
ATGATACTTG	AACGAAGTTC	ATTGTTAGGT	GCGTGAAGAG	ACACGGCAAG	ATTGACCTGA	3720
ACCCCTTCAT	CAGCAAAGTC	ACGAATTTTA	TGAGCCAAAC	CTGAGGTTGA	AACCGTGATG	3780
TGACGAGCAC	CGATAGCCAT	TCCTTTATCA	TCATTGATAG	TACGAAAGAA	ATTCAAGACA	3840
TTGTTGTAAT	TATCAAAGGG	CTCACCATT	CCCATGACAA	CGATATGGCT	GATGCGTTCA	3900
TCCTGACCAC	GCTCATCAAA	GTATTTCTGA	ACCAGCATGA	TTTGCGCTAC	GATTTACCCG	3960
TTATTGAGGT	CACGTTGCTT	CTTAATCAAA	CCAGAGGCAC	AGAAGGTACA	ACCGATATTA	4020
CAGCCGACCT	GAGTGGTCAC	ACAGACAGAT	AAACCATAGT	GTTGACGCAT	GAGTACAGTC	4080
TCAATTAAAC	TACCGTCGGG	CAATTCAAAG	AGATATTTGA	CTGTACCATC	AGCAGACTCT	4140
TGCACAATAC	GTTGTTTCAA	GGGATTGACC	ACAACTGGT	CATTGAGCTT	AGCAATCAAA	4200
TCCTTGAAA	GGTTGGTCAT	TTCTTCAAAT	GACTGCACAC	GTTTACGGTA	GAGCCATTCC	4260
CAGATTGAT	CTGCACGGAA	TTCTTTTCT	CCCTGCTCCA	ATACCCATTG	CTGCATGGTT	4320
TGATGTACCA	AACTATGAAT	TGAGGGTTTC	ATTTCTTCTC	CTTATTTCTT	ACTCACTTCT	4380

773

GACGAATGAC AAAATGACGT TGTCCCTTGT CGTCTTTCTG ACGACGTCTA TTTTCTTAT 4440
 CTGCATTGCGA CTTTCGTTTA GTTTGAGTCG GTTCTTTCC TTTCTAGAA GGTGTTTCTT 4500
 CTTCCTCTT ACGCATTTTC TTGTCAAATG ATGCTCGCTT AGGGGCTTCA TTTCTAAGA 4560
 CAAAATAGGC ACAACCATAA CTACAATACT CTAAAAGGTA GTCTTGTAAG CGACTGATTT 4620
 TTTCAAGTTT TTCTTCTGTT CGGTCATCCT TGTAAAAACC TCGTAGGCGA AGCTGTTCTG 4680
 TGCTCCAGTC CCCCACGATA TAATCAAAC TGGTTAATAC TTCTGAAAA CGCTGATTAA 4740
 AAGTCGTAC ATCAAAGGCA TCCTTGATAT TTTCAACCA GGAAGAGCT ATCCCTCCG 4800
 TTTCGACCTT GTCCCGTGT AAATGGAAC CCGGACCAGG AACTTGTTA TAGTTGTATA 4860
 ATTCAGGTGC AATTCTTTT CGCATAGATA TCCTTTTTC ACGATTACTT AATACTTTAT 4920
 TCTACCATAA TTTCTAGCAG TTAGCACGTT TCTCATAAAA ATGAAAAAG TCTGACGATT 4980
 TTGTCAGACC AGAATCTTAT AACCTAAAA GAGAAGAACA ATTCTCCCT CCAACTATCA 5040
 TTATTTAGCA GCTGCGTACA ATTCATCTAC TTTATTCCAG TTGATTACTG AAAAGAAAGC 5100
 TTTGATGTAG TCAGGACGCA CGTTGCGGTA TTTCACGTAG TAAGCATGTT CCCAAACGTC 5160
 CAAGCCCAAG ATTGGTTTTT TACCTTCTGA GATTGGGTG TCTTGGTTTG CTGTTGAAGT 5220
 CACTTCAAGT TTCCCTTCTT TGTGACAAC CAACCATGCC CAACCTGAAC CAAAACGAGT 5280
 TGTGCTGCT GCAGTGAAG CTGCTTGGA TTCTTCAAAT GAACCAAATG TTGCATCGAT 5340
 TGCTGCTGCC AGTTCTGCTG AAGGAGCTGT TTTCTCGGA GTCATCAATT CCCAGAAAAG 5400
 AGCGTGGTTC AAGTGCCGC CACCATGTT GATAAGTGCT TGACGGATAT CAGCTGGGAT 5460
 AGATTCTACA TCAGCAAGCA AGGCTTCAAG GTCTTCACCG ATTTCAGGGT GTTTTCTAA 5520
 AGCTGCATTG GCATTGTTGA CATAAGTTTG ATGGTGTT 5558

(2) INFORMATION FOR SEQ ID NO: 104:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 6735 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

GGAATTGTAA ATATCATATT GTTTTGCAC CCAAATATCG TCGTCAAATC ATTTATGGCA 60
 GATACAAAGC TAGTATCGGA AGAATCATAC GTGACTTATG TGAGCGTAAG GGTGTAATAA 120
 TCCATGAAGC GAATGCTTGT TCAGACCATA TTCACATGCT TATCAGTATT CCTCCGAAAC 180

774			
TTAGTGTTTC	GTCCCTTATG	GGCTATTTAA	AGGGCAAGAG CAGTTTGATG ATTTTGTATA 240
AGCATGCGAA	TTTAAAATAC	AAATATGGCA	ATCGCAAGTT TTGGTGTAGA GGCTATTATG 300
TAGATACGGT	AGGCCGTAAT	CAGAAAGTGA	TAGCTGAATA TATTCAGAAT CAATTACAAG 360
AAGACAGAGT	AGCAGACCAG	CTCACGTTAT	TCGAGTCAGT AGATCCGTTT ACTGGCGAAA 420
TAAATAAGAG	GAAGTAACTA	AGGTGCTTTA	GCACCTGCTC GGGAAAGTGG TGC GCGAGGA 480
AGCTATTTTC	GTGGGCCTTT	GGCCCTGGCC	GGTAGAAGCG GCTTATAGCC GCAGAACAAA 540
CCACCAGTTC	ACACTGGTGG	TTTTGATTTA	AAAAACTTGA TACATAAAAA TAAAAGTCTA 600
TATAAAGGAT	GGTAAAATTC	CTGTTGTCCG	ATTTGGACAA TATCCTAAAT AGTTACAATA 660
TATGGTCTAT	ACTTTTCTTT	AGGAGAAAGC	TAGATGTACA GACGTTTGAG AGATTGAGG 720
GAGGATCATG	ATCTGCCCCA	AAAGCAAATA	GCTACAATAC TTTCGTTTAC AAATTCAGCT 780
TATGCCAAAA	TTGAACGGGG	TGAGCATGCG	TTGACGGCTG ATGTATTGGT TAAACTCTCA 840
GATTTCTATG	ACGTCAGTAC	AGACTATTTA	TTGGGATTAA CTGATTTTCC TGATAAAATT 900
CGCTTTAGAA	AATAATCTCC	TCAATTTTCT	AGAGTTTGAA AATGAGTGAG ATTTTATTAT 960
TGCCCTTTGA	CAACTGAATA	GCCTAAAATG	GTACTTTTCT CATTTGTGGA GCAAATTTGA 1020
ATGGCTCGCC	ATGATAAGAG	CGATTTTAAA	ATCATCAATA AAATAGAGCG ATACTTTATA 1080
TGCCATGATA	CAAAATGATAT	ACAATGATAC	TTCTGACCGT TCAGCCTGCC AACGTAAAAG 1140
AGCAGCAAGT	GAAATCTTTA	TGATGACTTC	ATCAGTCATG CCACGTTGAA TGTGTGAGTT 1200
TGTTAGATAA	ACGCAATTAA	TCCTCAAAAG	GTTCCCGGAA CCTTTTGAGT TCTACAGACG 1260
CATCACGTGG	AGTGTGTAAG	CTTGTGCTA	AAAGCGTAAA AACCTTGGA CGAAGGAAT 1320
AATAGACTTT	CTGCGAAACA	AAAATATAAT	ACAATAAAAC TATGAATGAT GAAGCAAGTA 1380
AACAATTGAG	CGATAGCCGT	TTCAAGATCC	TTGTAGGTGT TCAGCGCACG ACTTTTGAAG 1440
AGATGTTAGC	TGTGTTAAAA	ACAGCTTATC	AACGTAAACG CGCAAAAGGT GGACGAAAAA 1500
GCAAATTAAG	CCTAGACGAT	CTCCTTATGG	TAACTATTCA ATACATGCGA GAATAGAGCA 1560
CTTATGAACA	AATTGCGGCT	GATTTTGGCA	TTCACGAAAG CAACTTAATC CGTCGGAGTC 1620
AATGGGTGA	AGCAACTCTT	ATTCAAAATG	GTTTACGAT TTCAAATCT GCCTTAATTC 1680
TGTAAAAACA	GTAAAATTCG	AAGGATTGTA	AGGTAAGAGT TTTTTCTTT CTGAAAAAAT 1740
GGTATAATAG	CAATCAAAAC	TAGAAAATAA	AACGGAATTT GGAACAGATT TGTCTGTATC 1800
CTAGTAGAGT	GGTGATACTA	TGAAGATTAG	TAAGAGGCAC TTATTAAATT ATTCCATCTT 1860
GATTCCCTAC	TTGCTTTTAT	CTATTTTGGG	CTTGATTGTG GTCTATTCTA CCACCAGTGC 1920
TATTTTAATT	GAAGAAGGCA	AGAGCGCCTT	GCAGTTGGTT CGAAACCAAG GAATCTTTTG 1980

775

GATTGTTAGT TTGATACTGA TTGCCTTAAT TTATAAATG AGACTAGATT TTTTGAGAAA	2040
TGAGCGACTA ATCATTTTAG TTATATTAAT AGAAATGCTT TTATTGTTCT TGGCTCGTTT	2100
TATTGGTATT TCCGTAAACG GGGCATACGG TTGGATTTCG GTTGCAGGAA TAACTATTCA	2160
GCCAGCTGAG TACTTAAAAA TCATTATTAT TTGGTATTTA GCTCACCGAT TCTCCAAACA	2220
GCAAGAAGAA ATAGCTACTT ATGATTTTCA AGTTTGGACT CAAAATCAAT GGCTTCCCCG	2280
TGCTTTTAAT GATTGGCGAT TCGTTCTCCT AGTTCTGATT GGAAGTTTGG GAATTTTCCC	2340
TGATTTAGGA AATGCGACTA TTTTAGTCTT GGTTCCTTG ATTATGTATA CAGTTAGTGG	2400
AATCGCTTAT CGCTGGTTT CAACCATCT GCGCTCGTA TCTGCCGCTT CTGTCTTGT	2460
CTTGACCACT ATCAGCCTAA TCGGTGTTGA GACCTTTTCA AAAATTCAG TATTCGGCTA	2520
TGTAGCCAAG CGCTTAGTG CCTTTTAA TCCTTTGCC GATCGTGCTG ATGCAGGTCA	2580
CCAGTTAGCT AATCTTATT TTGCCATGGT CAATGGCGGT TGGTTTGGTC TAGGTCTTGG	2640
AAACTCGATT GAAAAACGAG GTTATTTGCC AGAAGCTCAT ACAGACTTTG TCTTTTCTAT	2700
CGTGATTGAA GAATTTGGCT TTGTGGTGC CAGTCTTATT TTAGCTCTCT TGTTTTTCAT	2760
GATTTTGGCG ATTATCTTGG TCGGTATCCG AGCGGAGAAT CCTTCAATG CCATGGTTGC	2820
ACTCGGTGTC GGAGGGATGA TGTGGTTCA GGTATTGTC AATATCGGAG GGATTTCGGG	2880
CTTGATTCCA TCTACAGGAG TGACTTTCCC CTCTTATCC CAGGGTGGAA ATAGTCTTCT	2940
AGTCTTATCA GTGGCAGTAG CCTTTGTCTT AAATATTGAT GCCAGTGAAA AACGCCCTAA	3000
ATTGTACCGA GAATTGGAAT ATCAACCAAT GAACCTTCTG TTGAAGTAGG ATAAAGAAAG	3060
GATAGTTTAT GTCTCTTCAA AAATTAGAAA ATTATAGTAA TAAAAGTGT GTGCAAGAAG	3120
AAGTCTTGAT TCTAACAGAA TTACTGGAAG ATATTACTAA AAATATGCTT GCCCCAGAGA	3180
CCTTTGAAAA AATAATACAG TTGAAAGAAT TATCAACGCA GGAAGATTAT CAAGTCTAA	3240
ACCGTCTAGT GACTAGCTTA TCAATGATG AAATGGTCTA TATTTACGC TATTTCTCTA	3300
TCTTGCTCT TTTGATTAAT ATTTAGAGG ATGTGGATT AGCTTATGAA ATCAATCATC	3360
AAAATAATAT TGATCAGGAC TATTTAGGTA AATTATCTAC AACGATTAAA TTGGTAGCAG	3420
AAAAGGAAAA TGCCGTTGAG ATCCTAGAAC ACTTGAATGT TGTCCCTGTT TTGACAGCCC	3480
ATCCAACACA AGTGCAACGC AAAAGTATGT TGGATTTAAC AAATCATATT CATAGTCTTT	3540
TGCGTAAATA CCGTGATGTT AAGTTGGGT TGATCAATAA AGATAAATGG TACAATGATT	3600
TGCGTCGTTA CATCGAAATT ATCATGCAGA CAGACATGAT TCGTGAGAAA AAATTAAAAG	3660
TGACTAACGA AATCACGAAT GCTATGGAAT ATTATAACAG CTCCTTTTGT AAAGCTGTAC	3720

776

CTCATTGAC GACGAGTAT AAGCGCTTAG CGCAAGCGCA TGGTCTGAAT TTA AACACAGG	3780
CTAAACCAAT CACCATGGGT ATGTGGATAG GTGGTGACCG TGATGGAAAT CCATTTGTTA	3840
CAGCAAAGAC CTTGAAGCAG TCTGCACTCA CTCAGTGTGA AGTCATCATG AACTACTATG	3900
ATAAAAAGAT TTACCAACTT TATCGTGAAT TTTCTCTTTC AACTAGCATT GTCAACGTCA	3960
GCAAGCAAGT CAGAGAAATG GCTCGTCAAT CCAAGGATAA CTCGATTTAC CGCGAAAAAG	4020
AGCTTTACCG TCGTGCCTTG TTTGATATTC AATCAAAAAT TCAGGCAACT AAAACCTATC	4080
TGATTGAGGA TGAAGAAGTT GGGACTCGTT ATGAAACCGC CAATGATTTC TACAAGGATT	4140
TGATTGCCAT TCGAGATTCT CTACTAGAAA ATAAGGGCGA GTCCTTGATT TCAGGTGATT	4200
TTGTGGAATT ATTGCAGGCA GTAGAGATAT TTGGTTTTTA CTTAGCATCA ATTGATATGC	4260
GACAAGACTC TAGCGTCTAT GAAGCCTGTG TGGCAGAACT CTTGAAATCA GCAGGAATTC	4320
ATTCTCGTTA TAGCGAGTTG AGCGAAGAAG AAAAGTGTGA CCTTCTCTTG AAAGAATTAG	4380
AAGAAGATCC CCGAATTCTT TCTGCGACTC ACGCAGAAAA ATCAGAATTA TTAGCAAAAAG	4440
AATTAGCTAT TTTAAGACG GCTCGTGTTC TGAAAGATAA GTTGGGAGAT GATGTCATCC	4500
GTCAGACCAT CATTTACAT GCAACCAGCC TTTCTGATAT GCTAGAATTA GCTATTCTGT	4560
TAAAGAAGT AGGACTGGTG GATACGGAAA GGGCGCGTGT TCAGATTGTT CCCCTTTTGT	4620
AAACAATTGA AGACTTGAT CATTCAGAGG AAACAATGAG AAAATATCTT TCTCTTAGCC	4680
TTGCCAAAAA ATGGATTGAC TCACGAAATA ACTACCAAGA AATCATGCTT GGCTACTCTG	4740
ACAGTAATAA AGATGGCGGT TACTTGTCAT CATGTTGGAC CCTCTACAAG GCTCAACAAC	4800
AATTGACTGC TATTGGAGAT GAATTTGGCG TTAAGGTTAC CTTCTCCAT GGTCTGGTG	4860
GTA CTGTCGG TCGTGGTGGT GGGCCAACCT ATGAAGCCAT TACATCTCAA CCGCTCAAGT	4920
CTATCAAGGA TCGTATCCGC TTGACGGAGC AGGTTGAAGT AATTGGGAAT AAATACGTA	4980
ACAAAGACGC CGCTTACTAT AACCTTGAAA TGCTAGTATC GGCAGCTATT AACCGTATGA	5040
TTACTCAGAA GAAGAGCGAT ACCAATACCC CAAATCGTTA TGAAACCATT ATGGATCAAG	5100
TAGTGGACCG TAGTTACGAT ATCTACCGTG ATTTGGTCTT TGGTAATGAG CATTTCTATG	5160
ATTATTTCTT CGAGTCAAGT CCAATCAAGG CTATTTCAAG TTTTAATATT GGTCTCTGTC	5220
CAGCCGCTCG TAAGACTATT ACTGAAATCG GTGGTTTGCG TGCCATCCCT TGGGTATTCT	5280
CATGGTCACA GAGTCGTGTT ATGTTCCCTG GATGGTACGG GGTGGTTCA AGCTTCAAGG	5340
AATTTATCAA TAAAAATCCA GAGAATATTG CTATCTTACG AGATATGTAC CAAAATTGGC	5400
CTTCTTCCA ATCGCTTCTT TCAAATGTTG ATATGGTTTT GTCAAAAATCA AATATGAATA	5460
TTGCTTTTGA ATATGCTAAA CTTTGTGAAG ACGAGCAAGT TAAGGCCATC TATGAGACTA	5520

777

TTTTAAATGA ATGGCAAGTT ACTAAGAACG TTATCTTGGC TATTGAAGGA CATGACGAAC 5580
 TCTTAGCTGA CAATCCATAT CTAAGAGCTA GTCTGGATTA CCGTATGCCT TACTTTAATA 5640
 TTCTCAACTA TATTCAGTTG GAGTTGATTA AACGCCAACG TCGTGGAGAA TTGTCCAGTG 5700
 ATCAAGAACG ATTGATTCAT ATCACCATCA ACGGAATTGC GACAGGATTG CGTAATTCAG 5760
 GTTGATAATT TTCAAGAGTG AATGCTAAAA GTGAATATCA AAAAAATTCT AATAGACTAT 5820
 TGACAAGTAG TTTAAAAATG ATATAATTTA ACCATTTCAGA AAAGTAATCA TACAAACTTT 5880
 TTAGAGAGTC TGTGGTAGCT GAAACAGAT AAGTGGCAAT GATGAAAATT GGGCTGAATG 5940
 CTATTTAGAA TTTGAAATTA TAAAAATTCG GTAAGCACAC CTTACAGTGC ATCTCGTTAT 6000
 TGCAGACTG AGCGATAGGG AAATTCCTTA TAATTGAGGT GGTACCGCGC ATCGACGTCC 6060
 TCACACAAGT TTTTGTGTG AGGATTTTTT TGATGGAGGT TAGTATGGAA AGAAAACGAT 6120
 GGCGTCGCTT GTTTAGATAA GTGAAATATG TTAAAGGAAA TAAAAAGGAG AAACAGAATG 6180
 AAAAAATAAC GTTTAATTGG AATTATTGCT GCATTAGCAG TCTTAGTAGC AGGAAGCTTG 6240
 ATTTATTCTT CAATGAATAA ATCAGAAGCT CAGAATAATA AGGATGAGAA GAAAAAACC 6300
 AAGATTGGTG TGCTTCAATT TGTGAGCCAT CCATCCCTTG ATTTGATTTA TAAAGGGATC 6360
 CAAGATGGAC TTGCAGAAGA AGGATATAAA GATGATCAAG TTTAAATTGA TTTTATGAAC 6420
 TCAGAAGGTG ACCAAAGTAA GGTGCGACA ATGAGTAAAC AATTGGTTGC AAATGGGAAT 6480
 GACCTTGTGG TTGGTATCGC AACACCAGCA GCCCAAGGGT TGGCTAGTGC AACAAAAGAC 6540
 CTACCGGTTA TCATGGCCGC TATTACAGAC CCAATTGGTG CTAAGTTGGT TAAAGATTG 6600
 AAAAAACCAG GTGGCAACGT TACAGGGGTA TCTGACCACA ATCCAGCTCA ACAACAAGTT 6660
 GAAGTATCA AGGCTCTGAC ACCGAATGTG AAAACAATCG GAGCTCTTTA CTCAAGTAGC 6720
 GAAGACAATT CAAAA 6735

(2) INFORMATION FOR SEQ ID NO: 105:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6516 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

CTAGAGGATC CCAGCAGGTA AATTGGCTTC AGCTGGCAAA AAAGTTGCCC TCGTTGAACG 60
 CAGCAAGGCT ATGTACGGTG GAACTTGAT CAACATTGGT TGTATCCCAA CTAACCTT 120

778

GCTAGTTGCT GCTGAAAAGG ACTTGTCTTT TGAAGAAGTC ATTGCTACTA AAAACACGAT	180
CACTGGTCGC CTCAACGGTA AAAACTATGC GACTGTTGCT GGTACAGGCG TAGATATCTT	240
TGATGCGGAA GCTCACTTCC TTTCAAATAA AGTCATCGAA ATCCAAGCTG GTGATGAAAA	300
GAAAGAACTG ACTGCTGAAA CAATCGTCAT CAACACTGGT GCTGTTTCAA ACGTCTTGCC	360
AATCCCTGGA CTTGCTACAA GCAAAAACAT CTTTGACTCA ACAGGTATCC AAAGCTTGGA	420
CAAATTACCT GAAAAACTTG GAATCCTTGG TGGCGGAAAT ATCGGTCTTG AATTGCGCGG	480
CCTTTACAAC AAACCTGGAA GCAAGGTCAC AGTCCTAGAT GCCTTGATA CATTCCTACC	540
TCGTGCAGAA CCTTCCATCG CAGCTCTTGC TAAACAATAC ATGGAAGAAG ATGGCATTGA	600
ATTGCTTCAA AATATCCATA CTAAGTAAAT CAAAAACGAT GGTGACCAAG TGCTTGTCTG	660
AACTGAAGAC GAAACTTACC GTTTCGACGC CCTTCTCTAC GCAACTGGAC GCAACCAAA	720
TGTAGAACCA CTTCAACTTG AAAATACAGA TATTGAACTA ACTGAACGTG GTGCTATTAA	780
AGTAGACAAA CACTGTCAAA CAAACGTTCC TGGTGTCTTT GCAGTTGGAG ATGTCAACGG	840
TGGCCTTCAA TTTACTTACA TTCACTTGA TGACTTCCGT GTTGTTTACA GCTACCTTGC	900
TGGAGATGGC AGCTATACAC TTGAAGACCG TCTCAATGTG CCAAATACTA TGTTTCATCAC	960
ACCTGCACTT TCACAAGTTG GTTTGACTGA AAGCCAAGCA GCTGATTTGA AACTTCCATA	1020
CGCTGTAAAG GAAATCCCGG TTGCAGCAAT GCCTCGTGGT CACGTAAATG GAGACCTTCG	1080
CGGTGCCTTC AAAGCTGTTG TCAATACTGA AACAAAAGAA ATTCTTGGAG CAAGCATCTT	1140
CTCAGAAGGT TCTCAAGAAA TCATCAACAT CATCACTGTT GCTATGGACA ACAAGATTCC	1200
TTACACTTAC TTCACAAAC AAATCTTCAC TCACCAACC TTGGCTGAGA ACTTGAATGA	1260
CTTGTTTGCG ATTTAAGTTG AGATTTAATC GTATCGAACA GCCCTCTTTG GGCTGTTTTT	1320
ACTTCTGCGG AATCTCAAAT CTGTCTTTCT CCTCTTTTAT GATATAATAG AAACATGAAC	1380
TTAAAACTA CTTTGGGCCT TCTTGCTGGG CGTTCTTCCC ACTTCGTTTT AAGCCGTCTT	1440
GGACGTGGA GTACGCTCCC AGGGAAAGTC GCCCTTCAAT TTGATAAAGA TATTTTACAA	1500
AACCTAGCTA AGAACTACGA GATTGTCGTT GTCACTGGAA CAAATGGAAA AACCTGACA	1560
ACTGCCCTCA CTGTCGGCAT TTAAAAGAG GTTTATGGTC AAGTTCTAAC CAACCCAAGC	1620
GGTGCCAACA TGATTACAGG GATTGCAACA ACCTTCCTAA CAGCCAAATC TTCTAAAACT	1680
GGGAAAAATA TTGCCGTCCT CGAAATTGAC GAAGCCAGTC TATCTCGTAT CTGTGACTAT	1740
ATCCAGCCTA GTCTTTTGT CATTACTAAT ATCTTCCGTG ACCAGATGGA CCGTTTCGGT	1800
GAAATCTATA CTACCTATAA CATGATATTG GATGCCATTC GGAAAGTTCC AACTGCTACT	1860
GTTCTCCTTA ACGGAGACAG TCCACTTTTC TACAAGCCAA CTATTCCAAA CCCTATAGAG	1920

779

TATTTTGGTT TTGACTTGGA AAAGGGACCA GCCCAACTGG CTCACTACAA TACCGAAGGG	1980
ATTCTCTGTC CTGACTGCCA AGGCATCCTC AAATATGAGC ATAATACCTA TGCAAACTTG	2040
GGTGCCTATA TCTGTGAAGG TTGTGGATGT AAACGTCCTG ATCTCGACTA TCGTTTGACA	2100
AAACTGGTTG AGTTGACCAA CAATCGCTCT CGCTTTGTCA TAGACGGCCA AGAATACGGT	2160
ATCCAAATCG GCGGGCTCTA TAATATCTAT AACGCCCTAG CTGCTGTGGC CATCGCCCGT	2220
TTCTTAGGTG CCGATTCGCA ACTCATCAA CAGGGATTG ACAAGAGCCG TGCTGTCTTT	2280
GGACGCCAAG AAACCTTTCA TATCGGTGAC AAGGAATGTA CCCTTGTCTT GATTAAAAAT	2340
CCAGTCGGTG CAACCCAAGC TATCGAAATG ATCAAACCTAG CACCTTATCC ATTTAGCCTA	2400
TCTGTCTCTC TTAATGCCAA CTATGCAGAT GGAATTGACA CTAGCTGGAT CTGGGATGCA	2460
GACTTTGAAC AAATCACTGA CATGGACATT CCTGAAATCA ACGCTGGCGG TGTTCGTCAT	2520
TCTGAAATCG CTCGTCGCCT CCGAGTGACT GGCTATCCAG CTGAGAAAAT CACTGAAACG	2580
AGTAATCTGG AGCAAGTTCT CAAGACCATT GAGAATCAAG ACTGCAAGCA TGCCTATATT	2640
CTGGCAACTT ATACTGCCAT GCTGGAATTT CGTGAAGTGC TGGCTAGTCG TCAGATTGTT	2700
AGAAAGGAGA TGAACATAAG GTTTATACTT CACTTTCCTC AAAAGATGGC AATTACCCCT	2760
ATCAGCTCAA CATTGCCAC CTCTACGGAA ATCTCATGAA TACTACGGGG ACAATGGAAA	2820
CATCCTCATG CTCAAGTATG TGGCTGAAAA ACTGGGAGCC CATGTGACCG TTGACATCGT	2880
TTCTCTCCAT GATGACTTTG ATGAAAATCA CTACGACATC GCCTTTTTCG GTGGTGGTCA	2940
AGACTTTGAA CAAAGTATCA TTGCAGACGA CCTACCTGCT AAAAAAGAGA GCATTGACAA	3000
CTACATCCAA AACGACGGTG TAGTTCTGGC TATCTGCGGT GGTTCCTAAC TATTGGGTCA	3060
ATATTATGTT GAAGCTTCAG GAAAACGTAT CGAAGGGCTA GGGGTCATGG GACACTACAC	3120
GCTCAACCAG ACCAATAACC GTTTTATCGG TGACATCAAG ATTCACAATG AAGATTTGCA	3180
TGAAACCTAC TATGGATTG AAAATCACCA AGGTCGTACC TTCCTCTCTG ATGACCAAAA	3240
ACCGCTGGGA CAGGTGTGCT ATGGAAATGG AAACAACGAA GAAAAGGTCG GTGAAGGGGT	3300
TCATTATAAG AATGTCTTTG GTTCCTACTT CCACGGGCCT ATCCTCTCTC GTAATGCCAA	3360
TCTGGCTTAT CGCCTAGTTA CTACTGCCCT CAAGAAGAAA TATGGTCAGG ACATCCAAC	3420
CCCTGCCTAT GAGGACATTC TCAGCCAAGA AATCGCTGAA GAGTACAGTG ACGTCAAAA	3480
CAAGGCTGAC TTTTCTTAAA CAAAGGAAAA TGATATCAAA GAACTCCGTT ATCTTGTCGG	3540
AGTTTTTTGT CTTTCTTTT ACCCTTCTCC CTTGCATTTT CTCTCATTTT TTGCCAAAAT	3600
AGAGGGGTAG AAAGAAGGTA GCATATGTCT AAATTACAAC AAATCCTAAC ATATCTTGAA	3660

780					
TCAGAAAAAC	TAGACGTCGC	TGTCGTATCT	GACCCCGTCA	CAATCAATTA	CCTCACTGGT 3720
TTTTACAGTG	ATCCCCATGA	ACGCCAAATG	TTCTCTTTTG	TCCTAGCAGA	TCAGGAACCT 3780
CTCCTCTTTG	TCCCAGCTCT	TGAAGTAGAA	CGTGCAAGTA	GCACCGTTTC	CTTCCCAGTA 3840
GTGGGGCTATG	TCGATTCTGA	AAATCCATGG	CAAAAAATCA	AACATGCTCT	TCCACAACCT 3900
GACTTCAAAC	GTGTCGCTGT	TGAGTTTGAC	AATCTCATCT	TGACCAAATA	CCATGGTTTG 3960
AAAACAGTTT	TTGAGACTGC	TGAGTTTGAC	AACCTCACTC	CTCGTATCCA	ACGCATGCGC 4020
CTCATCAAAT	CAGCTGATGA	AGTGCAAAAA	ATGATGGTTG	CAGGTCTTTA	TGCTGACAAG 4080
GCTGTTTCATG	TTGGTTTGA	CAATATTTCT	CTTGATAAGA	CTGAGACAGA	TATCATCGCA 4140
CAAATCGACT	TTGCCATGAA	ACGTGAAGGT	TATGAAATGA	GCTTTGATAC	CATGGTCTTG 4200
ACTGGTGATA	ATGCTGCGAA	TCCACACGGC	ATTCCAGCAG	CTAATAAGGT	TGAAAATGAT 4260
GCTCTTCTCC	TCTTTGACCT	GGGTGTTCTG	GTCAATGGCT	ATGCGTCAGA	TATGACTCGT 4320
ACAGTCGCTG	TCGGCAAACC	AGACCAATTC	AAGAAAGATA	TTTACAACCT	GACTCTTGAA 4380
GCCCAACAAG	CTGCTCTTGA	CTTTATCAAG	CCAGGTGTGA	CTGCTCATGA	AGTGGACCGC 4440
GCTGCCCGTG	AGGTCATCGA	AAAAGCTGGT	TATGGTGAGT	ACTTCAACCA	CCGTCTCGGG 4500
CATGGTATCG	GTATGGATGT	CCATGAATTC	CCATCTATCA	TGGAAGGAAA	CGACATGGTC 4560
ATCGAAGAAG	GCATGTGCTT	CTCTGTTGAA	CCAGGTATCT	ATATCCCTGG	TAAAGTCGGT 4620
GTTCGTATTG	AAGACTGCGG	TGTTGTTACC	AAGGATGGCT	TCAACCTCTT	TACAAGCACC 4680
AGCAAAGATT	TGCTTTATTT	TGATTAAACT	ATATAGCCCC	TATGCTTTCC	TTTCAAAATA 4740
TCTAGGGGCT	ATTTTATGT	CATTTTCTG	CTATTATGCT	AAAGAAATTG	GCTGCAATAA 4800
TCTAACCCTA	AGTGTCTGGA	ATGATAACGA	GGGTGCTCTC	CGCTTTTATC	AAAGACAAGG 4860
GATGAAACCC	CAAGAAACAA	CAATGGAAAT	GATAATTGAT	TAAGAAGTCA	TCTATCAAAA 4920
GATGTTAGAA	AAAGTTCAAT	TTCAC TAGAA	AATGAGGAAA	ATCTCCCCAC	AATAAAAACGC 4980
ATAGTATCAG	GTATTGTGTA	CTGACCCCAA	ACAGTTAGAC	AATTAATTTA	TCCGAAGGAT 5040
TTAGTTCTGT	ACTGCACAGG	ACTAAGTCCT	TTTAGTTTGA	CCTTAATTCG	TTTGTGTGTG 5100
TAGTAATCAA	TATAGTCTAT	AATGACTTGT	TCCAATTGGT	TAAGTGATTT	AAATGTTTTT 5160
TCATAGCCAT	AAAACATTTC	GGATTTTAAA	ATGCCAAAGA	AAGATTCCAT	CATACCGTTG 5220
TCTTGGCTGT	TTCCCTTGCG	TGACATAGAT	GCTTGAATTC	CCTTATTCTC	TAGGAACCGA 5280
TGATAAGAAT	CGTGTGGTA	TTGCCAGCCT	TGGTCACTAT	GGAGAATCGT	ATTCTCGTAG 5340
TGCTTCTCTT	TGAATGCCTG	TTCCAACATT	GTTTGTAATT	ATTCTAAATT	AGGCGAACAA 5400
GAAAGATTAA	AAGCAATAAT	TTCGCTGTTA	AAGCCATCTA	AAACTGGTGA	TAAGTAAAGC 5460

781

```

TTTTGAGTAC TTGCTGGAAT GGCAAATTCA GTCACATCTG TGTAGCACTT TTCCATTGTT      5520
TTAGAGCCTT CAAATTGGGC TTGAATGAGA TTCTCTGCCT TCTTACCAAC GTCTCCCTTA      5580
TGAGAAGAAT ATTTTCGTTT CTTTCGCATT TTAGCTTGTA AATTGAGTAC TTTCATCAAG      5640
CCTTGAACTC TTTTATGATT TACCAGATAA CCACGATTTT TTAGTTCTAA ATGAACCCGG      5700
CGATAAGCAT AATTTCCCTT GTGTTTCGATA AAGATGGATT GAATTTCACT TTTAAGCTCT      5760
TGCTCTTTAT CTGTTTGTG TAGCTGTTTC AAGTGATAGT AGTAGGTCCA ACGAGCTAGT      5820
TTAATGGCTT CTAGAAGAAG ATCTAACGAA AACTCAGTCA TTAATTCCTG AACAATTCTT      5880
GTCTTTCTTC TTTCTCTTTT TCCTCCTTCA ATCGGAGTTC TCTTAACCTT TTTAGGATGG      5940
CATTTCTCCG TCTCAGGTAC TCTCCCTCTT GTTTTCTCAA CAATAGTATA CCCGTTTTTC      6000
CTGTATTGTG CTAGCCAGTT AAGAAGTATC GTACGACTTG GGAGACCGTA TTCAAGAGAA      6060
ACTCTATCTT TAGTCCAGCC TTCATGTCAG ACTTTATTAA CCCCAATTAT TCACCCCAAA      6120
TCTAAAAACC ATCCAGAATC CTTGCCTTAG CTTAGATCCT GGATGGTTTC TTTTTCACC      6180
CAATGGGTGT TTTTACTAG AAAAAAAGA GTTTCCCTT TATGGTATAA GTGTAGAAAA      6240
AAACACAAAA AGAAAGGAAA CTCACATGAA CAGTTTACCA AATCATCACT TCCAAAACAA      6300
GTCTTTTAC CAACTATCTT TCGATGGAGG TCATTTAACC CAGTATGGTG GTCTTATCTT      6360
TTTTCAGGAA CTTTTTCCC AGTTGAACT AAAAGAGCGG ATTTCTAAGT ATTTAGTAAC      6420
GAATGAmCAA CGCCGCTACT GTCGTTATTC GGATTGAGAT ATCCWTGTCC AGTTCCTCTT      6480
TCAACTGTTA ACAGGTTATG GAACGGAATA TGCTTG      6516

```

(2) INFORMATION FOR SEQ ID NO: 106:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 14654 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

```

TTTTCAACCC ATATCGTGGC TCCTGAATAC TACTTACTGA CAACTATGCT ATCAGAGACT      60
TCTCTACTTG TTTTCTATAT CATTTTCATC CATAGAAAAC AACTCATCCA CTTGGGACAT      120
ATCTTTAGCT ATACTGTTTCG ATACTCTCTC TTTTCACTT CCTTTGTAGC AATTTATTTT      180
CTGATTAATT TCGTGTATCC TGTAATATG GTCATTAATT TGCCATTTTT GATTAATACT      240
GGTTTGATTG TCTTGCTATC AGCTATCTCT TATATTAGTC TACTTGTCTT CACAAAAGAT      300

```

782

AGCATTTTCT ATGAATTTT AAACCATGTC CTAGCCTTAA AAAATAAATT TAAAAAATCA	360
TAGGAGTTTA AAATGAAACA ACTAACCGTT GAAGATGCCA AACAAATTGA ATTAGAAATT	420
TTGGATTATA TTGATACTCT CTGTAAAAAG CACAATATCA ACTATATTAT TAACTACGGT	480
ACTCTGATTG GGGCGGTTCG ACATGAGGGC TTTATCCCTT GGGACGACGA TATTGATCTG	540
TCCATGCCTA GAGAAGACTA CCAACGATTT ATTAACATTT TTCAAAGGA AAAAAGCAAG	600
TATAAGCTCC TATCCTTAGA AACTGATAAG AACTACTTTA ACAACTTTAT CAAGATAACC	660
GACAGTACGA CTAAAATTAT TGATACTCGA AATACAAAA CCTATGAGTC TGGTATCTTT	720
ATCGATATTT TCCCTATAGA TCGCTTTGAT GATCCTAAGG TCATTGATAC TTGTTATAAA	780
CTGGAAAGCT TCAAACTGCT GTCTTTCAGT AAACATAAAA ATATTGTCTA TAAGGATAGC	840
CTTTTAAAAG ATTGGATACG AACAGCCTTC TGGTTACTCC TTCGACCGGT TTCTCCTCGT	900
TATTTTGCAA ATAAAATCGA GAAAGAAATT CAAAAATATA GTCGTGAAAA TGGGCAATAT	960
ATGGCTTTTA TCCCTTCAAA ATTTAAGGAA AAGGAAGTCT TCCCAAGTGG TACCTTTGAT	1020
AAAACAATCG ATTTACCCTT TGAGAATTTA AGCCTTCCTG CACCTGAAAA ATTTGATACT	1080
ATTTTGACAC AATTTTATGG AGATTATATG ACCCTACCAC CAGAAGAAAA ACGCTTCTAC	1140
ACTCATGAAT TTCACGCTTA TAAATTGGAG GATTAGGATG CAATATTTAG AAAAAAAGA	1200
AATTAAAGAA ATTCAACTAG CCCTGCTGGA CTATATTGAT GAGACTTGTA AGAAACATGA	1260
TATTCCTTAT TTTCTCAGTT ATGGAACCAT GCTTGGAGCC ATCCGCCACA AAGGTATGAT	1320
TCCTTGGGAT GATGATATTG ATATTTCCCT TTATCGTGAG GATTATGAGC GTTACTGAA	1380
GATTATTGAA GAAGAAATC ACCCTCGCTA CAAGGTTCTT TCCTACGATA CATCTTCTTG	1440
GTACTTCCAT AATTTTCGAT CGATTTTGGA CACTTCTACT GTTATAGAAG ACCATGTTAA	1500
GTACAAGCGT CATGATACCA GCCTTTTCAT CGATGTCTT CCAATTGATC GATTTACAGA	1560
CTTGAGCATT GTCGACAAGA GCTATAAGTA TGTGGCTCTT CGTCAACTAG CTTATATCAA	1620
AAAATCACGA GCAGTTCACG GTGATAGCAA ACTAAAAGAT TTTCTTAGAT TATGTAGCTG	1680
GTACGCTCTC CGATTTGTCA ATCCTCGCTA CTTTACAAG AAAATTGATC AACTAGTCAA	1740
AAATGCTGTA ACCAACACTC CTCAATATGA AGGAGGAGTT GGGATCGGTA AGGAAGGGAT	1800
GAAAGAAATC TTCCCAAGTT ATACCTTTAA AGAACTGATT TTAAGTGAAG TTGAGGGCCG	1860
TATGTTGCCT GTTCCCAAAA AATATGACCA ATTTTAAACC CAGATGTATG GCGATTATAT	1920
GACACCACCA TCAAAAGAAA TGCAAGAGTG GTATAGTCAT AGCATTAAG CTTATCGCAA	1980
AAACTGATTG AGGGGGATTA TACAACTAC TAAGATAGAG GTTATTCAAA AACATAATTT	2040
TAGTAGAAAA TGAAATACAT ATTCCACAA TAAACGCAT CATATCAAGG TTTTGA AAAA	2100

783

ACCTTGATAT GATGCGTTT ATAATTTTAA AGACTTTTTT CTATAGTAGA TTGAAATAAG	2160
ATGCGAACAA ATCAATTAGA AAATTCAAAT TAATTTATAG AAATATTTTA GTATTCCTGT	2220
GTA CTGTTCT AAATTCAGTC TGCTATATCT TATTTTCTA TTTAAATCGC TTCTGTAACA	2280
AAGCTACGAC TTTCAAGTAC CTTAAGCATG GCATTAGCTG TATCTAGCGC TGTGAAGAGG	2340
GGCACCCCGT GTTCAATGGC TGAACGACGA ATTTGCTCAC CATCTTCGTC AGCAGTTCGT	2400
TTTGTTCCTA CTGTGTTAAT GATAGCTTGA ATCTCTCCTT TGC GTACAAA ACTTGGGATA	2460
TCCTTATCGT CATCACC AAT CTTACCAACA GGTGGGCTT GCAAGCCATG ACTAGCAAAG	2520
AAGGCTGCTG TCCCTTCTGT CGCAAGGATT CCATAACCAA TGT TTTGGAA ACGACGAGCC	2580
AAGTCAAGG CTCTCTCTT GGCATCATCA GCGATGGTAA AGACGACATT ACCAAAAGTT	2640
GGCAAGTGTA GATAAGAAGC TTCAAAGGCT TTATAGAGAG CT TTTTCCAA AGTAGCATCA	2700
GAACCCATAA CTTCACCTGT TGACTTCATT TCAGGACCGA GCAAGCTGTC TACCTTAGCT	2760
AGTTTGGTAA AGGAGAAGAC AGGTGCCTTG ATATGAACAC GGGTGCTTTC AGGGTAAAGT	2820
CCATTTTGGT AGCCAAGTTC TGATAAACTT TGACCAAGAA TGAGTTTGGT CGCTACTTGA	2880
GCCATAGGAA TATTGGTTAC CTTAGATAGG AATGGAACAG TACGGCTGGC ACGTGGATTG	2940
ACCTCAATAA CGTAGACTTT TTCATCCTTG ATAACAACT GGATGTTCAT CATTCCAAGG	3000
CAGTGAAGAC CGATTGCTAA GCGTTTGGTG TAGTCTGCGA TGGTCTCCTG AACCTTTTGC	3060
GACAAGGTTT GTGGTGGGTA AACAGCCATT GAGTCACCTG AGTGGACACC AGCACGTTCTG	3120
ATATGCTCCA TGATACCAGG AATGAGTACA TTTTACCAT CTGAAATGGC ATCAACTTCG	3180
CAC TCTTGCC CAACGATATA AGAGTCGACA AGAACTGGGT GGTCTGGACT AGCCTTAACA	3240
GCAGTTTCGA TGTAAGAAGC AAGGTCTTCT TCGTTTTCAA CGATTTCCAT GGCACGTCCA	3300
CCAAGTACAT AAGATGGGCG GACAAGA ACT GGAAGCCAA TCTTGCGAGC TGCAAGAGCT	3360
GCTTCTTCTT CATTGGTAGC CGTTTGTCTT GGTGGCTGTG GAATATCCAA TTCTTTGAGA	3420
GCTTGCTCGA AGAGGTCAGC GTCTTCGGCA CGATCTAGGT CAGCAACCTG TGTACCAAGG	3480
ATGGTCACAC CTGCTTTTGC CAATGGCTCC GCAAGGTTGA TGGCTGTTTG ACCACCGAAC	3540
TGAACGATAA CTCCCTTTGG TTGTTC AAG TCAATGACGT TCATAACATC TTCGAATGTC	3600
AATGGCTCAA AGTAAAGCTT ATCTGATACA GAGAAGTCTG TTGAAACGGT CTCTGGGTTT	3660
GAGTTCATGA TGATAGCTTC ATAACCAGCT GCCTGGATAG CCTTAACAGA GTGAACGGTT	3720
GCGTAGTCAA ACTCAACCCC TTGACCGATA CGGATTGGAC CTGAACCTAG GACAAGTACA	3780
GATTCCTTAT CAGATCTGAT AGATTCATTT TCCCAACCAT AGGTGAATA GAAATATGGC	3840

784

GTTTCGGAGT CGAACTCTGC CGCACAAAGTG TCTACCATCT TATAAACTGG AACAACTCTG	3900
TTTTCCAAGC GAAGTTGGCG AACTTTATCA TCAGTCGTTC CCCAGAGTTC AGCAATCTTA	3960
CGGTCTGAAA AACCATTAAAG TTTGGCTGTT TTCAAAACTT CTAAATCTTG TGGATGAGCA	4020
CCCAATTCTT GCTCAATTTC AAAGATATGC AAGAGTTTAT CAAGATAGAA GATATCAATT	4080
TTTGTAAGCT CTGCAATTTC TTCAGGTGTG TAGCCACGAC GAATGGCTTC TGATACGTAG	4140
AAGAGACGGT CATCTTGGGC TTTGACAACC TTTTCAATCA AGGCATCATC AGAAACTGCT	4200
GCAAGTTCAG GTATTTTCATT GTGGTGCACC CCAATTTCAA GGGAGCGGCA GGCCTTGAGA	4260
AGAGATTCCT CGATGTTACG ACCGATTGCC ATGACTTCTC CAGTCGCCTT CATTTGTGTA	4320
CCGAGACGGC GTTCACCCCTT TTCAAACTTG TCAAATGGGA AACGTGGAAT CTTAGCAACT	4380
ACGTAGTCAA GGGCTGGTTC AAACATGGCA TAGGTTGAAC CTGTAACTGG GTTTATAACC	4440
TCATCCAAGG TCAAACCTAC TGCAATCTTG GCAGCCAAC TAGCAATCGG ATATCCTGTC	4500
GCTTTAGAAG CAAGGGCTGA CGAACGTGAT ACACGAGGGT TTACTTCGAT AACATAATAC	4560
TTGAAGCTGT TAGGATCAAG AGCTAGCTGA ACATTACATC CACCTTCAAT CTTGAGGGCA	4620
CGAATAATGC TCAAGCTCGC ATCACGAAGC ATTTGGTTTT CATAGTCTGA CATGGTTTGC	4680
GCAGGGGCAA ATACAATGGA ATCCCCTGTG TGAATCCCAA CTGGGTCAA GTTTTCCATG	4740
TTACAAACAA CCAAGGCATT GTCAGCTGAG TCACGCATCA CTTCGTATTC AATTTCTCTG	4800
AAACCGGCAA TCGAACGCTC AATCAAACAT TGGGTAACAG GTGACAATT CAAACCATT	4860
TCAGTGATTT CACGCAATTC TTTCTCGTTG GCACACATAC CACCACCAGT ACCACCAAGG	4920
GTAAAGGCTG GACGAACGAT GACTGGGTAG CCAATTGTCG CTGCAAAGGC AACTGCTTCT	4980
TCTACTGTGT TAACAATTTT AGATTCTGGA ATGGGTGTT CAAGCTCTTC CATCAATTGT	5040
TTAAAGAGGT CACGGTCCTC CGCTTGGTCA ATGGCAGATA ATTTGGTACC CAGAAGTTCA	5100
ACGCCAAGCT CGTCTAGGAT ACCATTTTGA GATAATTCCA TGGCCATGTT GAGACCTGTC	5160
TGACCACCGA GTGTTGGTAG CAAGGCATCT GGACCTTCCT TACGAAGAAT ACGTGTCACA	5220
AACTCAAGTG TAATCGGTTT AATGTAAACC TTGTCAGCAA TTTCTTGTC CGTCATGATG	5280
GTGTCAGGAT TTGAGTTAAC CAAAACAACC TCATAACCTT CCTCTTTCAA CGACAAGCAA	5340
GCCTGAGTCC CAGCGTAGTC AAACCTAGCA GCCTGACCAA TAATAATCGG ACCAGAACCA	5400
ATCACCATAA TTTTGTGAAT ATCAGTACGT TTAGGCATAT ATAAGATATT AAGGGTGTCA	5460
AGCGGACAAA GCTAAATAG GAGTTATGAC GAAGAACTGT CAGTTCTAGG AATAACTATC	5520
TTTTTAGCAC CGTCCGTAGC CCGTATTCAG TTCAGCAAAT ACGGAGCACC CTTCTCCTTT	5580
CTATTCGTG CCTCTCAGG CGACATTAAA TAAGATACAA AGGACGAATA GAAAGCGATT	5640

785

GAATTTTAGG AAATCAAGGA AGGATTGACA ATCCAAGTTG GTTCTCTAC ATTCTGAGCT	5700
TTCCGTCCGT GTTCAGTTAC ATAAATTCTC CGACGAGCTT TTAGTCGTTC TTAGTTTGAT	5760
TGTTTAAAAA CTTCATCAT CTCGATAAAC TCGTCAAATA GGTAGCTAGC GTCGTGTGGC	5820
CCAGGAGCTG CATCTGGGTG GTATTGAACA GAGAAAGCAG GTTGGTATCT GTGGCGCACA	5880
CCTTCCACTG ACTTGTCATT GATTCTCTCG TGGGTAATAA TCAAGTGCTC TGGCAAATCC	5940
TCGCGGCTGA CTGCATAACC ATGGTTCTGG CTGGTGAAGT CTACTCGTCC TGTTCGATT	6000
TCACGTACCG CATGGTTGAA TCCACGGTGG CCAAACCTCA TCTTATAGGT CTTAGCCCCG	6060
TTTGCCATTG CAAAGAGTTG GTGTCCCAT AATATACCA AGATTGGAAT TTTTCCTTGT	6120
ACACCGCGAA TCATGTCGAG TGCTTGTGGA ACGTCTCTG GGTACCTGG ACCATTGAC	6180
AACATAACTC CGTCAGGATT GAGATGGAGA ATTTCTTCAG CCGTTGTCGA ATAAGGAACA	6240
ACTGTCACGT TACAGTTGCG TTTAGAAAGT TCACGTAGGA TTGAGTGCTT GAGACCAAAG	6300
TCCACTAGCA CCACGCTCAA ACCAACTCCT GGAGCTGGAT AAGACGTTT AGTAGAAACC	6360
TGTTTGATAT TGTCTGTCGG TAAACTGTT GCTTGGAGCT GGTCCGTCAC ATGGTCCATA	6420
CTGTCCCAA CATGGGTCAA GGTGCGACG ATAGTACCAT GCTTACGAT AATCTTGSTA	6480
AGAGCACGCG TATCAATTCC TGAATCCCT GGAATTTCT TGGCTTTCAA AAATTCATCC	6540
AAGGTCATTT GGTGCGCCA GTTGCTAGCT CTACGCGCTT CTTCAAAAAC AACGACTCCC	6600
TTACAAGTTG GAATAATGGA TTCATAATCA TCACGATTAA TACCATAATT TCCTACCAA	6660
GGATAAGTAA AGGTCAAGAT TTGTCCATTA TAAGACTGGT CTGTAATGGA TTCTTGSTAG	6720
CCGGTCATCC CTGTATTAAA GACGATTTG CCTGTTACAT CAATATCTGC TCCGAAGGCC	6780
TTGCCTTCAA AACTGTGCC ATCTTCTAAT ACTAGAATTC TTTTGTGCAT ATTTTCACCT	6840
CTCGTGGACG CTCACTGGCG TCTTTTAACG TCTTGTGTTT TAGTTGGCGT TTCTACTCGC	6900
TAGTACGGAT TCTAAGATTG CCATTCGAAC AAAGACACCA TTGGTCATTT GTTGACAAT	6960
CCGTGATTTT GGTGCTTCAA CCAAGTGGTC TGCTATTTCT ACATCACGAT TGATTGGAGC	7020
TGGGTGCATG AGGATTGCTG TTTCTTTCAA ACGATCGTAA CGTTCTTGAG TCAAGCCATG	7080
TTGGGCATGG TAGTCTTCTT TTGAAAATAC AGCTCCACTA TCATGGCGTT CGTGTGCAC	7140
ACGGAGAAAC ATCATGACAT CAACCTGATC AATGATTTC TCAATGGTTA CAACTGTCC	7200
ATAGTCTGCA AACTCTTGAC TTCTCCATTC CTCAGGTCCA GCGAAAAAGA GTTCAGCTCC	7260
CAAGCGTTTC AAAATCTGCA TATTGGATTT GGCAACGCGT GAGTGGTCCA AGTCACCTGC	7320
AATAGCAACT TTAAGACCCT CAAAGTGGCC AAATTCCTCA TAAATGGTCA TCAAATCAAG	7380

786						
CAAGCTCTGG	CTAGGGTGTT	GGCCCGAACC	ATCTCCACCA	TTGATGATGG	AAGTCGTAAT	7440
CGTTGGACTA	GCAATCAATT	CTCTATAGTA	GTCGACCTCT	GGATGGCGAA	TCACACAGAC	7500
ATCCACTCCT	AAAGCAGACA	GAGTCAAAAT	GGTGTCTATA	AGTGTCTCAC	CCTTATTAAAC	7560
CGAGCTAGTC	TTCACATCAA	AGTCAAGTCG	TTCCAATCCA	AGTTTAATCT	CTGCGACTTC	7620
AAAGGACTTA	TGTGTCCGTG	TAGAATCCTC	AAAGAAGAGA	TTGGAAACAA	TCGGATGGTC	7680
TTTCATAGGA	AGCTGGGCTC	CATTTTAAAA	CTCAATTCCCT	CGCTTGATCA	ATTTCATTAC	7740
TTGATCGACA	GTGAGGTCTT	CCATGGACAC	CACATGGTTC	AATGCTTGTT	GATTTTCTGA	7800
CATGGCTACT	CCTTTAACTT	TCTAAGCTTC	TTCAAGTAATC	AGAACTCTGT	CTTGGTCATC	7860
AAGTTCTGTC	ATCTCTACGA	TGATTTCTTC	AGAACGACTG	GTTGGGATAT	TTTTTCCAAC	7920
GTAATCTGGA	CGGATTGGCA	ATTCTCTATG	TCCACGATCG	ACTAGAACTG	CTAAACTCAC	7980
ACGCGCAGGA	CGACCATGAC	CGACAATATT	ATCAATAGCA	GCACGGATGG	TACGACCTGT	8040
ATAGAGCACA	TCATCCACCA	AGATAACTTC	GCGGTCTGTC	ACATCGACAG	AAACCAAAGA	8100
AGTATCTTCT	CCACTTTTAA	CATCATCACG	GAAAGGTTTA	GTATCCAATT	CCACAACAGG	8160
AACTGAAAGA	TTTTCTAACT	GCTTCAAACG	TTCTTGATT	CGGTGGGCAA	TAAAGACACC	8220
ACGAGTTTAA	ATACCAGCCA	AGACGATCTT	ATTCAAATCT	TTGTTGCGTT	CGATAATCTC	8280
ATAAGTAATA	CGCGTAATCG	CTCGTTTGAC	GGTCAATTCG	TCTACAACTT	CTTTTGTTTT	8340
CATGACAAAC	CTCCAAAAAG	AAAAGTCTCC	TTAAACAAGG	AGACTTGAAA	TTTATAGCCA	8400
AGCGAGCCCT	ACTGCACACA	GTATAGACTT	CACCCTTCTA	CTTTATCGCG	CTCCTTGCCT	8460
GCCTCACGGG	ACAGGTTTAA	AGGAATATTT	AGTTATCATT	TACTATAGCA	CAAAGCATGC	8520
TTAAAATCAA	GCAAAAAGTT	TCAATGTAGC	ATCTTACAAA	TTGCTAAAAT	CATATAATTG	8580
TGGGTACTGG	TCACACTCTG	GATTTTTTGG	ATGGCAAATG	GCTCTTCCAA	AATAAATCAT	8640
GGCCTGATGG	GCAGCTAACC	ACTGCTCAGG	CGGCAAGATA	TCCATGACCC	GCTTTTCCAC	8700
CTCAAGTGGC	GTGCTGATT	TTTTGACAAT	ATCGTGGTGT	TTGCAAATAC	GCTCCACAAG	8760
AGTATCCACT	GCAAAGGCTG	GAATTCCAAA	TCCTACACTC	ATGACAACAT	TGGCTGTCTT	8820
GCGACCAACA	CCTGCCAAAC	TCTCCAATTC	TTCAAGTGTG	TGAGGGACTT	GACCATCAAA	8880
ATCGTCTAGT	AACTGTTGGG	CACATTTTTT	AAGGAATTTA	GCTTTATTCC	GATACAATCC	8940
CAAGCGAGAA	ATATGTGAAG	CAATCTCACT	CTCTGTCGCT	ACAGACATAG	CTTGGGGTGT	9000
TGGAAAGGCA	ACAAAGAGAC	CTGGTGTGGC	CTTATTTACC	GCTGCATCTG	TCGTCTGGGC	9060
TGATAACATG	ACCGCAACCA	GGAGTTCAAA	ATGATTGGTA	AAATCAAGAC	TAGGCTTGGC	9120
ATCTGGGAAG	AGGGCAATGA	TTTCTTCTAG	CACCTTTCGT	GCTCGTTTTT	TTGACAAGAC	9180

787

CATTATTCAT CTCCGTCAAA TAGTCCTTGT AAGCCAGCAA AAGGACTGTT TTCTTCTTTC	9240
TTTACTGCTT TTTGAGCTTG GTATTCTTCC TCTGTCATGA TTTGCCAGTC ATTTCTCTGAG	9300
ATAAATCCTT GACCAGCTTC TTCTTCAGCC GTCAAGACCT TGATAGGAAT GTTTAGCAGG	9360
ATATTGTCTG ATACACTCTC AGCAAGGTCA AGCTCCCCAT TTTCGATGGG CAAGACCAAG	9420
TCATCATCTA AAACCTTCTG ATCTAGCTGG TTAGTTGCGC CTTCCATGAA AACTTCCGTG	9480
ACTGGATAAG ATTCAACTAA CTCAACTGGC TCCATACTGC GACTCGACGC AAGAACAATG	9540
GTATAAGATA GTTGATAATC TAAGAAATAC ATACGGTCTT CATATTGTAC TTCCCCAACT	9600
GCAAGGATAT CTTTACATC TAAATTTCT TGATTACGTG CACGCAGGTC ATCAACTAAA	9660
TCTAACGTTT GTTCAAAGTT CAAACCTTCA GACTGCTTAC GAATTTCTTG AATATTTAAT	9720
TTCACTATTC CTCCATAAAG ATTTACTCTC TTGATTATAC CATGAAAAGG CTACAAATCA	9780
GCACACCAAA CTTTGTAATT AAAATTCAAA ATTTTAACAT ATTTACTATG ATAGTTTAT	9840
TTTTTAGTGC TATACTATAG GGAAAGAGTA CATCAGATCA AGGAGGATGC TCACATGGAA	9900
GACAAGAAAC TCATTCAACT CCTATCCAAG TTAATAAAAA GCTACCAAAA CTGTAAACAG	9960
GGTACGGCAG ATGATATTCG ACTACAAGAG CTGCTAAACA CTACTATGCA AGAGCTCAAA	10020
AAAACGGAAC AGTTGAACAA CAGTATCTTA ATTGATCTTG AGAAATTTTA CCAACCTACC	10080
AGTCTTCTGA TTGGACTGGG TAGCCTAAAA CTAAACGATC AAGCACGCAC TGCTTGGCGA	10140
AACTATGATA AATTCCATTA CGATCATGTC AAACACGTAC TAAGTCTCTA TGGACCTGTT	10200
TTTGAATTTT AGAGCATAGA ATTTCCAGTT TTCTGTTGAC AAAATTTCTT TAAAGGTATA	10260
ATATAAGAT ACTAATACTC GGAGGTAAGG GAGACATGAA CAACTAAGTC TATCAAATAA	10320
AGAACCTTTA TTTAGTAGAT CTTGTTTTTG TCTCTTTTTG TGTGCTCTTT TATGCTCTTT	10380
TTCTGGCATG TTAATAGAGT TTTTTTGACA TAGACTTTGG GCTCTACTAG GTAAAGTAGA	10440
GCTTTTTGTT ATGCACTATG AACATTCTAG AAAGGGAAAT CATATGATAA AAATCAATCA	10500
TCTAACCATC ACACAAAACA AAGATTTACG AGATCTTGTA TCTGACCTAA CCATGACCAT	10560
CCAAGACGGG GAAAAGGTTG CTATTATTGG TGAAGAAGGA AATGGCAAAT CAACCTTACT	10620
TAAAATTTTA ATGGGGGAAG CTTTGTCTGA TTCTACTATC AAGGGAAACA TCCAATCTGA	10680
CTATCAGTCA CTGGCCTACA TTCCTCAAAA AGTCCCTGAG GACCTAAAAA AGAAAACCTT	10740
ACACGACTAC TTCTTTTATG ATTCATTGA TTTAGACTAC AGTATCCTCT ATCGTTTGGC	10800
GGAGGAATTG CATTTTGATA GCAATCGTTT CGCAAGTGAC CAAGAGATTG GCAATCTATC	10860
AGGGGGCGAA GCTTTGAAAA TTCAGCTTAT CCATGAGTTA GCCAAACCCT TTGAGATTCT	10920

788

ATTTTGTAGAT GAACCTTCAA ATGACCTAGA CCTTGAGACA GTTGATTGGC TAAAAGGCCA	10980
GATTCAAAAG ACCAGGCAAA CCGTTATTTT CATTTCCTCAT GATGAAGACT TTCTTTCTGA	11040
AACGGCAGAC ACTATTGTTT ACTTGCGACT GGTCAAACAC CGTAAAGAAG CGGAAACGCT	11100
AGTAGAGCAT TTAGACTATG ATAGCTATAG TGAGCAGAGA AAGGCTAATT TTGCCAAACA	11160
AAGTCAGCAA GCTGCTAACA ACCAAAGAGC CTACGATAAA ACCATGGAAA AACATCGGAG	11220
AGTTAAGCAA AATGTAGAAA CTGCGCTTCG AGCTACCAA GATAGTACTG CCGGTCGCCT	11280
ATTGGCTAAA AAGATGAAAA CTGTCCTCTC ACAAGAAAA CGCTACGAAA AGGCAGCTCA	11340
GTCCATGACT CAAAAGCCAC TTGAAGAGGA ACAAATCCAA CTTTCTTTT CAGACATCCA	11400
ACCATTACCA GCTTCTAAAG TCTTAGTCCA ACTGGAAAA GAAAATTTGT CCATTGACGA	11460
CCGAGTTTGT GTTCAAAAAC TACAACCTAC TGTCCGTGGC CAAGAAAAA TCGGTATTAT	11520
CGGGCCAAAT GGTGTGGGA AATCAACTCT GTTAGCCAAG TTACAGAGAC TTCTGAATGA	11580
TAAAAGAGAG ATTTCACTTG GTTTATGCC ACAAGATTAC CACAAAAAAC TGCAATTGGA	11640
TTTATCCCA ATAGCCTATC TCAGTAAAC TGGGAAAAA GAGGAACTAC AGAAAATCCA	11700
ATCTCACCTA GCTAGTCTCA ATTTAGTTA TCCAGAAATG CAGCATCAA TTCGCTCCTT	11760
ATCTGGCGGA CAACAGGGAA AACTCCTGCT TTTGGATTGA GTCCTGCGCA AACCAACTT	11820
TCTCCTGCTG GATGAACCA CACGAACTT TTCTCCCTT TCTCAACCC AAATCAGAAA	11880
ACTCTTTGCT ACCTATCCAG GCGGTCTCAT CACTGTTTCG CATGACCGTC GTTCTTAAA	11940
AGAAGTCTGC TCGATCATCT ATCGCATGAC AGAACACGGT TTGAAGCTAG TTAATTTAGA	12000
AGATTATATA ATTTGCAACA TAGCAAAAAT CCAGAGACGA CCTCTGGATT CTTTACATC	12060
TGTTTTAAAC GTTCAATCCG TTCTGAGATA GGTGGGTGGG TATAAAGAG TTTTGGAAC	12120
CCCCACCTT TCTTAGGATC ATTGATATAA AGGGCACTGC TAGCATCATC GACGTGGCGA	12180
CTCATAGGTT TGCTATTGTC CAACTTATCT AGGGCATTA TCAATCCCTG GGGATTGCGA	12240
GTCAGCTCGA CACTAGATGC ATCTGCCAGA AATCCCTCT GACGAGAAAT AGCGAGCTGA	12300
ACCAAGGTTG CAGCGAGAGG TGCCAGTACA ATAGCTAGTA GGGAAACCAC TAGCATAATG	12360
ATTTCAAGAC CATTTCCATC TCGGTCATCA TCACCTCGTC TGCGACCTGC TCCACCCAC	12420
CACATCATAC GACCTGCCAT ACTAGAAAGC ATGGTGATAG CACTAGCAAG GGCAACTGCA	12480
ATAGTCGAAA TACGGATATC ATAATTACGA ATATGACTGA CTTTATGTCC CATAACAGCT	12540
TCTAGTTCTT CACGATTCAT GATAGCTAGT AGACCTGAAG TCGCAGCAAC AGCCGCATTT	12600
TGAGGATTAG AACCTGTCG AAAGGCATTT AAGGCTGGAT CATCAATGAT GAAAACACGG	12660
GGCATAGGAA TCTGAGCGAC CAGAGCCATA TCTTCCACTA CATGGTAGAG GTCTGGTGCC	12720

789

GTTTGCTCAT CCACCTCAGC CGCTCCATTC ATGGACATGA CAATCTCTGT CGATTGAAAA	12780
ATCATAGACA AAGCGTAGAT AAAGCCGATA ATCAGTGCAA TAACCAAACC ACCAAGTCCA	12840
GATCTTATAA AGAGATAACC AACCGCATAA CCAACAAGAG CTAAGAGTAG GAAAAATACC	12900
AGCAACAAAA TCCAGGTTTT TCGTTTATTG CTTGCAATTT GATCAAACAA CATCTTAGTC	12960
ACCTAAACCG CTAAATCAA CTTTAGGAAC CGACTTTTCC TCTTCAGGTG TTTGAAGGAA	13020
ATCTGCCGCT TTAAATCCAA ACATTCCAGC GATAATATTG CTCGGGAAAG TTTCTAATTT	13080
TACATTGTAG TTGCTGACAA CACTGTTATA GAGTTGACGA GAGTAAGAAA TTTTATTTTC	13140
TGTGTTGTGC AACTCCTCTT GCAATTTAAC AAAGTTAGCA CTAGCTTTCA AATCTGGATA	13200
GCTTTCTGCA ACTGCAAAAA TACCTGAAAC CTGACGAGTG AGGGCATCAC TGGCTTTCAT	13260
AGCTTCTGCT GGTGAAGTCG CTGCCGCCAC TTGGTTACGT AGTTCTGCCA CCTTTTCAAG	13320
GGTAGAACCT TCATATTTGG CATAACCTTT TACAGTCTCA ATCAAGTTTG GCAAGAGGTC	13380
ATTGCGACGT TTCAACTGAA CATCAATCTG ACTCCAAGCC TCCTTGGTTT GCATACGATT	13440
TTTAACCAAA CCGTTATAGC TAACAATCAC AAAAATAACA ATAAGAGCGA TAACTCCAAG	13500
AATAATCCAA GTCATAATAT AAGTCCTTTC TGCTTTTAGA TTAGTACCAG TATATCAAAT	13560
TTTCTATGAT TGTGGTAAAA TAAGATGATA CTAAAGAAGG AAATAACTAT GAAACCAAAA	13620
ACATTTTACA ACTTGCTTGC CGAGCAGAAT CTTCACCTTT CGGACCAGCA AAAAGAACAA	13680
TTTGAACGTT ATTTTGAGCT CTGGTCGAG TGGAAAGAGA AGATTAATTT GACGGCGATT	13740
ACGGACAAGG AAGAAGTTTA TCTCAAACAT TTTTACGATT CGATTGCACC CATTTCTCAA	13800
GGTTTGATTC CCAATGAAAC TATCAAACCT CTTGATATCG GGGCTGGGGC AGGATTTCTT	13860
AGTCTACCAA TGAAAATTCT CTATCCGGAG TTAGATGTGA CCATTATTGA TTTCACTCAAT	13920
AAGCGCATCA ACTTCCTACA ACTCTTGGCT CAAGAACTGG ATTTGAACGG AGTTCAATTC	13980
TACCACGGAC GTGCCGAAGA TTTTGCCCAA GACAAGAACT TCCGTGCTCA ATATGATTTT	14040
GTAACAGCTC GTGCGGTTGC CCGTATGCAG GTCCTATCTG AATTGACTAT TCCCTACCTT	14100
AAGGTTGGTG GCAAACCTATT AGCACTCAAG GCTAGCAATG CGCCTGAGGA ATTATTAGAA	14160
GCTAAGAATG CCTCAATCT CCTTTTGTAGT AAGGTCGAAG ACAATCTCAG TACGCCCTAC	14220
CGAATAGAGA TCCGCGCTAT ATCACAGTGG TAGAAAAGAA AAAAGAAACA CCAAATAAAT	14280
ATCCACGTAA GGCTGGTATG CCAAATAAAC GCCCACTTTA AATTMTTTAG TAAACAAATG	14340
TTTACAAAAT CAGCCTCGCT CTTTATTATTC TAGGCTCGGG AAAAAATGAT TTACAAAATC	14400
AGCCTCGCTC TTTTATTCTT AGGCTCGGGA AAAAATGATT TACAAAATCA TTTTMTTCTG	14460

790

CTATACTATC CTAAGCAAAG GTTTTTAATG TCATCCCGTG AGGTGACGAA GACGCAGAAA	14520
TATTTAAAAC TCTTTAAAT CTAAATTTTA AAGAAGTCTT ACTCTGAGGG CCTATTGCTG	14580
TAAAATAATG GGCTCTTTTT TGATGCCCAA AAGTGAGGTT TATATGAAAC AAGAATCAAC	14640
TGTTGATTG TTAC	14654

(2) INFORMATION FOR SEQ ID NO: 107:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6405 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

AGAAAAATCT GCTTTACAGA AAATAAAAT AATAGGAGAA AATCTATGTC AGATTTGAAA	60
AAATACGAAG GTGTCATTCC AGCCTTCTAC GCATGTTATG ATGATCAAGG AGAAGTAAGC	120
CCAGAACGTA CGCGTGCCTT GGTCAATAC TTCATTGATA AAGGTGTTCA AGTCTTTAT	180
GTCAATGGTT CTTCTGGTGA ATGTATCTAC CAAAGCGTTG AAGATCGCAA GTTGATTTTG	240
GAAGAAGTCA TGGCGGTAGC AAAGGTAAAT TGACCATTAT TGCCCATGTT GCTTGCAATA	300
ATACTAAAGA TAGTATGGAA CTTGCTCGCC ATGCTGAAAG CTTGGGAGTA GATGCTATTG	360
CAACGATTCC ACCAATTAT TCCGCTTGC CAGAATACTC AGTTGCCAAA TACTGGAACG	420
ATATCAGTTC TGCAGCTCCA AACACAGACT ACGTGATTTA CAACATTCCT CAATTGGCAG	480
GGGTGCTTT GACTCCAAGC CTTTACACAG AAATGTTGAA AAATCCTCGT GTTATCGGTG	540
TGAAGAACTC TTCTATGCCA GTTCAAGATA TCCAAACCTT TGTGAGCCTT GGTGGAGAAG	600
ACCATATCGT CTTAATGGT CCTGATGAGC AGTTCCCTAGG AGGACGCCTC ATGGGGGCTA	660
GGGCTGGTAT CGGTGGTACT TATGGTGCTA TGCCAGAACT CTTCTTGAAA CTCAATCAGT	720
TGATTGCGGA TAAGGACCTA GAAACAGCGC GTGAATTGCA GTATGCTATC AACGCAATCA	780
TTGGTAAACT CACTTCTGCT CATGGAAATA TGTACGGTGT CATCAAAGAA GTCTTGAAAA	840
TCAATGAAGG CTTGAATATT GGATCTGTTC GTTCACCAT TACACCAAGT ACTGAAGAAG	900
ATCGTCCAGT TGTAAGAAGC GCTGCTGCCT TGATTCGTGA AACCAAGGAG CGTTCCTCT	960
AATCTAAAAG GAGGTATTTA TGACATATTA CGTTGCAATT GATATCGGTG GAACCAACAT	1020
CAAGTATGGT TTGGTTGATC AAGAGGGGCA ACTTCTTGAA TCGCATGAAA TGCCAACTGA	1080
GGCGCATAAG GGTGGACCTC ATATCTTACA AAAGACCAA GATATCGTAG CTAGTTATTT	1140
AGAAAAAGGC CAGTAGCAG GTGTTGCCAT ATCTTCTGCT GGGATGGTGG ATCCGGATAA	1200

791

GGGTGAGATT TTCTATGCTG GGCCGCAAAT CCCTAACTAC GCAGGCACCC AGTTCAAAAA	1260
GGAAATCGAA GAAAGCTTTA CTATTCCTTG TGAGATTGAA AATGATGTCA ACTGTGCAGG	1320
TCTTGCTGAG GCACTATCTG GTTCAGGCAA GGGAGCAAGT GTGACACTTT GCTTGACCAT	1380
TGGAACCGGT ATCGGTGGTT GCTTGATTAT GGATAGGAAA GTCTTCCATG GTTTTAGCAA	1440
TTCAGCCTGT GAAGTCGGT ATATGCATAT GCAGGATGGA GCTTTTCAAG ACTTGGCTTC	1500
TACAACAGCT TTAGTGAAAT ATGTAGCTGA AGCCCATGGA GAAGATGTTG ATCAGTGGA	1560
TGGCCGTAGA ATTTTCAAAG AAGCCACTGA AGGAAACAAA ATCTGCATGG AAGGTATTGA	1620
CCGTATGGTT GACTATCTAG GAAAAGGTCT GGCAAATATT TGCTACGTTG CCAATCCAGA	1680
AGTGGTTATT CTTGGTGGTG GTATCATGGG GCAAGAGGCT ATCCTCAAAC CTAAGATCCG	1740
TACAGCCTTG AAAGAGGCTT TGGTACCAAG TTTAGCAGAA AAAACACGAT TAGAATTTGC	1800
CCATCACCAA AATACAGCAG GGATGTTGGG TGCATATTAT CATTTTAAGA CAAAACAATC	1860
CTAGTTTGGC TCAGCCAAAC TAGGATTTTC TTACACGTTT TTGTCTACGA TAGCCGTTGA	1920
GTTTTATTATT TTCCAGTAG CTATTAAAGA TTTTTTCCTT GCTTTCGCGA TTGATTTCCA	1980
AAAAGTAGGC ATAAATCAA TCGATAAAGA AGAGCATAGG AAGTTGAGCG GATATTCGTT	2040
GGATATAGGA GGGTTGGCTG TGGGTGGCTA CAAGAACAGT CTCTGTATAG GTCTGGCTAT	2100
CTTTATTGGG AACACTTGTA AAGAGTACAG TCTTTCCTT CATCTCCTTA GCATCTAATA	2160
GACTATCTAA AATAGAAGGA GTTGAGCCTG AAAGTGAGAA GCCCAGTACT AGACAATTTT	2220
CATCCATGAT GCTGGTTGTC CAGGCAAAGC CGTCTTGGTC TGTCAAAGCT TCGCAGACCA	2280
CACCTAGTCG CATAAACGT AATTTTATTT CACGGGCGAC GAGGCCAGAA CTCCCTGTTT	2340
CAAAGAAGTA GATACGCTCA GCATCTTCGA TTAGCTGGGC AATTCGTTCT AGTTGGATTT	2400
CGTCAATCAA GTCTTGTTT TGTTCCTCA TATGCTATA ACTTCTGAGG ACTCGTTTGG	2460
TCAGTGGACT GTGCTGGAG ACTTGGTTGG CTTGATTTTC TGCCTGATGT TGGTATTGGA	2520
AAATAAATTC TCGGTAGCCA GTAAAGCCAC ACTTTTTCAG AAAGCGGGTC AAAGCAGCTT	2580
GAGAAATATG TAATTTTGG GTGACTTGTT GAGAAGATAA ATCATCTGTA ATCGTTTCAG	2640
CTTGCAAAAA ATAGCGAGCG ATTTCTTGTT CTAGGTCTGT CATTTCTTCA AAATGTGAAT	2700
CAATGATAGT TCGATATCT GGTGTGTTCA TAGGGAAAGC TCCTTTACAT GAGTCATACT	2760
GGAAGACTAG ATCAGAGAAT AGTCACACTT CATTATAACA CATAATATAA GGATAGATAA	2820
ATAAAAACGC ATCTCTGTTT TAAAAACGAA AAAATCGAAA AAGCTTCTCT CTTTCCATA	2880
ATTTTCTACT CAAATTGTGG TACAATTAAG AGTAAGATTT TAAGTTAGAA ATGAGACTGA	2940

792

TTTGTATGAG AAAATTTAAC AGCCATTTCGA TTCCGATTTCG GCTTAATTTA TTGTTTTCAA	3000
TCGTCATTTT ACTCTTTATG ACCATTATTG GTCGTTTGTT GTATATGCAG GTTTTGAACA	3060
AGGATTTTTA CGAAAAAAG CTAGCTTCAG CTAGTCAGAC CAAGATTACA AGCAGTTCAG	3120
CCCGTGGGGA AATTTATGAT GCTAGTGGAA AACCTTTGGT AGAAAAATACG TTAAAGCAGG	3180
TTGTTTCCTT TACGCGTAGC AATAAAATGA CGGCTACAGA CTTAAAAGAA ACAGCTAAAA	3240
AGTTACTGAC TTATGTGAGC ATCAGTTCTC CAAATTTGAC AGAACGCCAG CTGGCGGATT	3300
ACTATTTGGC TGATCCTGAA ATCTATAAAA AAATAGTGGA AGCTCTCCCA AGTGAGAAAC	3360
GCTTGGATTC AGATGGCAAT CGTCTATCCG AATCAGAACT GTATAACAAT GCGGTCGATA	3420
GTGTACAAAC GAGTCAACTA AACTATACAG AGGATGAAAA GAAAGAAATC TATCTTTTTA	3480
GTCAGTTAAA TGCTGTTGGA AACTTTGCGA CAGGAACCAT TGCGACAGAT CCTCTAAATG	3540
ATTCTCAGGT GGCTGTTATT GCCTCTATTT CAAAGGAGAT GCCTGGCATT AGTATTTCTA	3600
CTTCTTGGGA TAGAAAGGTT TTGGAACTT CCCTTTCTTC TATAGTTGGG AGTGTATCCA	3660
GTGAAAAAGC TGGTCTCCCA GCGGAAGAAG CAGAAGCCTA TCTTAAAAAA GGCTATTCTC	3720
TAAATGACCG TGTAGGAACC TCCTATTTGG AAAAGCAATA TGAAGAGACC TTACAAGGAA	3780
AACGCTCGGT AAAAGAAATC CATCTGGATA AATATGGCAA TATGGAAAGC GTGGATACAA	3840
TTGAGGAAGG TAGTAAGGGA AACAATATCA AACTGACCAT TGATTTGGCT TTCCAAGATA	3900
GCGTGGATGC TTTACTGAAA AGTTATTTCA ATTCTGAGCT AGAAAATGGT GGAGCCAAGT	3960
ATTCTGAAGG TGTCTATGCA GTCGCCCTTA ACCCAAAAAC AGGTGCGGTT TTGTCTATGT	4020
CAGGGATTAA ACATGACTTG AAAACGGGAG AGTTGACGCC TGATTCCTTG GGAACGGTAA	4080
CCAATGTCTT TGTTCCAGGT TCGGTTGTCA AGGCGGCGAC CATCAGCTCA GGTTGGGAAA	4140
ATGGAGTCTT GTCAGGAAAC CAGACCTTGA CAGACCAGTC CATTGTCTTC CAAGGTTTCAG	4200
CTCCCATCAA TTCTTGGTAT ACTCAGGCTT ACGGTTTCATT CCCTATCACA GCGGTCCAAG	4260
CTCTGGAGTA TTCATCAAAT ACCTATATGG TCCAAACAGC CTTAGGTCTT ATGGGGCAAA	4320
CCTATCAACC CAATATGTTT GTCGGCACCA GCAATCTAGA GTCTGCTATG GAGAACTGC	4380
GTTCAACCTT TGGCGAATAT GGCTTGGGTA CTGCGACAGG AATTGACCTA CCAGATGAAT	4440
CTACTGGATT TGTTCCCAA GAGTATAGCT TTGCTAATTA CATTACTAAT GCCTTTGGGC	4500
AGTTTGATAA CTATACGCCG ATGCAGTTGG CTCAGTATGT AGCAACTATT GCAAATAATG	4560
GTGTTTCGTG GGCTCCTCGT ATTGTTGAAG GCATTTATGG TAATAATGAT AAGGGAGGAC	4620
TGGGTGACTT GATTCAGCAA CTGCAACCGA CAGAGATGAA TAAGGTCAAT ATATCCGACT	4680
CCGATATGAG CATCTGTCAC CAAGGTTTTT ATCAGGTTGC CCATGGTACT AGTGGATTGA	4740

793

CAACTGGACG TGCCTTTTCA AATGGTGCCT TGGTATCCAT TAGCGGAAAA ACAGGTACAG	4800
CCGAAAGCTA TGTGGCAGAT GGTGAGCAAG CAACCAATAC CAATGCGGTG GCCTATGCCC	4860
CATCTGATAA TCCCCAAATC GCTGTCGAG TGGTCTTTCC TCATAATACC AATCTAACAA	4920
ATGGTGTAGG ACCTTCCATT GCGCGTGACA TTATCAATCT GTATCAAAAA TACCATCCAA	4980
TGAATTAGAA AGGAAATTAT GCTTTATCCA ACACCTATTG CCAAGTTGAT TGACAGTTAT	5040
TCTAAGTTAC CAGGTATCGG GATTAAGACG GCTACGCGTC TGGCCTTTTA TACGATTGGG	5100
ATGTCTGCTG ATGATGTCAA TGAATTTGCA AAAAATCTCC TTTCTGCTAA GAGAGAATTG	5160
ACATATTGTT CTATTTGTGG ACGTTTGACA GACGACGATC CTTGTTCTAT CTGTACTGAT	5220
CCGACTCGTG ACCAGACAAC AATTTTAGTT CTTGAGGATA GTAGAGATGT GGCAGCCATG	5280
GAAAATATCC AAGAATACCA TGGACTCTAT CATGTCCTTC ATGGCCTCAT TTCTCCTATG	5340
AATGGTATCA GTCCGGACGA TATCAATCTC AAGAGCCTTA TGAAGCTCT TATGGATAGT	5400
GAGGTTTCAG AAGTGATTGT GCGGACTAAT GCTACAGCGG ATGGTGAAGC GACTTCCATG	5460
TATCTTTCAC GTTTGCTCAA GCCGGCTGGT ATCAAGGTTA CGCGTCTAGC ACGAGGTCTC	5520
GCTGTGGGAG CGGACATTGA GTATGCGGAC GAAAGTACAC TCTTACGAGC CATTGAAAAAT	5580
CGGACAGAGT TGTAAGTGTA GGCAAATTTA CGAACTCCAT TCATTATATA AAAATCAAAG	5640
AGGCTGAAAA TCGTTCCTAT CGGCCTCTTT TTGTATAGTG TGATGACTAG GCTCAGGTTT	5700
AAGTTTTAAA AAACCAAGCA AATATGATAT ACTAAAGAGC GAGTATTCTA GTAGAATTAG	5760
GACAAATAAT ATGAAACAAA CGATTATCTT TTTATATGGT GGACGGAGTG CGGAACGCCA	5820
AGTCTCTGTC CTTTCAGCTG AGAGTGTCAT GCGTGCGGTC GATTACGACC GTTTCACAGT	5880
CAAGACTTTC TTTATCAGTC AGTCAGGTGA CTTTATCAAA ACACAGGAAT TTAGTCATGC	5940
TCCGGGGCAA GAAGACCGTC TCATGACCAA TGAAACCATT GATTGGGATA AGAAAGTTGC	6000
ACCAAGTGCT ATCTACGAAG AAGGTGCAGT GGTCTTTCCA GTCCTTCACG GGCCAATGGG	6060
AGAAGATGGC TCTGTTCAAG GATTCTTGGA AGTTTTGAAA ATGCCCTACG TTGGTTGCAA	6120
CATTTTGTCA TCAAGTCTTG CCATGGATAA AATCACGACT AAGCGTGTTC TGGAACTTGC	6180
TGGTATTGCC CAAGTTCCTT ATGTGGCTAT CGTTGAAGGC GATGATGTGA CTGCTAAAAAT	6240
CGCTGAAGTG GAAGAAAAAT TGGCTTATCC AGTCTTCACT AAGCCGTCOA ACATGGGGTC	6300
TAGTGTCGGT ATTTCTAAGT CTGAAAACCA AGAAGAATC CGTCAAGCCT TAAACTTGC	6360
CTCCGATAT GACAGCCGTG TCTTGGTTGA GCAAGGAGTG AATGC	6405

(2) INFORMATION FOR SEQ ID NO: 108:

794

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11309 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

CGAGCTCGGG TACCGGGATT TTAAGGAGTT TGATATGTAT AACCTATTAT TAACCATTTT	60
ATTAGTATTA TCTGTTGTGA TTGTGATTGC AATTTTCATG CAACCAACCA AAAACCAATC	120
CAGCAATGTA TTTGATGCCA GTTCAGGTGA TTTGTTTGAA CGCAGTAAAG CTCGCGGTTT	180
TGAAGCTGTA ATGCAGCGTT TGACAGGGAT TTTAGTCTTT TTCTGGCTAG CCATTGCCTT	240
AGCATTTGACG GTATTATCAA GTAGATAAGA AAATAATGGG CAGGACTAGG TCTTTGCCTC	300
TTTTTATTTT TAAAGGATGT TTGAGAAGGT TTTACAGTAA AAGAAAATTA AAAAATCTAG	360
AAAGAAAATA TGAAAGATAG AATAAAAGAA TATTTACAAG ACAAGGGAAA GGTGACTGTT	420
AATGATTTGG CTCAGGCTTT GGGAAAAGAC AGTTCCAAGG ATTTTCGTGA GTTGATTAAA	480
ACCTTGTCCT TAATGGAAAG AAAGCACCAA ATTCGTTTGG AAGAAGATGG TAGTCTGACA	540
TTAGAAATTA AGAAAAACA TGAGATTACC CTCAAGGGGA TTTTTCATGC CCATAAAAAAT	600
GGCTTTGGCT TTGTTAGTCT GGAAGGCGAG GAGGACGACC TTTTGTAGG GAAAAATGAT	660
GTCAACTATG CTATTGATGG TGATACCGTC GAGGTAGTGA TTAAGAAAGT CGCTGACCGC	720
AATAAGGGAA CAGCAGCAGA AGCCAAAATT ATTGATATCC TAGAACACAG TTTGACAACA	780
GTTGTCGGGC AAATCGTTCT GGATCAGGAA AAACCTAAGT ATGCTGGCTA TATTCGTTCA	840
AAAAATCAGA AAATCAGTCA ACCGATTTAT GTTAAGAAAC CAGCCCTAAA ATTAGAAGGA	900
ACAGAAGTTC TCAAAGTCTT TATCGATAAA TACCCAAGCA AGAAACATGA TTTCTTTGTC	960
GCGAGTGTTT TCGATGTAGT GGGACACTCA ACGGATGTCG GAATTGATGT TCTTGAGGTC	1020
TTGGAATCAA TGGACATTGT ATCCGAGTTT CCAGAAGCTG TTGTTAAGGA AGCAGAAAGT	1080
GTGCCTGATG CTCCGTCTCA AAAGGATATG GAAGGTCGTC TGGATCTAAG AGATGAAATT	1140
ACCTTTACCA TTGACGGTGC GGATGCCAAG GACTTGGACG ATGCAGTGCA TATCAAGGCT	1200
CTGAAAAATG GCAATCTGGA GTTTGGGGTT CACATCGCAG ATGTTTCTTA TTATGTGACC	1260
GAGGGGTCTG CCCTTGACAA GGAAGCCCTT AACCGTGCGA CTTCTGTTTA CGTGACAGAC	1320
CGAGTGGTGC CAATGCTTCC AGAACGACTA TCAAAATGGCA TCTGCTCTCT CAATCCCCAA	1380
GTTGACCGCC TGACCCAGTC TGCTATTATG GAGATTGATA AACATGGTCG TGTGGTCAAC	1440
TATACCATTA CACAAACAGT TATCAAGACC AGTTTTCGTA TGACCTATAG CGATGTCAAT	1500

795

GATATCCTAG CTGGCGATGA AGAAAAGAGA AAAGAATATC ATAAAATTGT ATCAAGTATC	1560
GAACCTCATGG CCAAGCTTCA TGAAACTTTA GAAAACATGC GTGTGAAACG TGGAGCTCTC	1620
AATTTTGATA CCAATGAAGC GAAGATTTTA GTGGATAAAC AAGGTAAGCC TGTTCATATC	1680
GTTCTTCGGC AGCGTGGTAT TGCCGAGCGG ATGATTGAGT CTTTATGTT GATGGCTAAT	1740
GAAACAGTTG CCGAACATTT CAGCAAGTTG GATTTGCCTT TTATCTATCG AATTCACGAG	1800
GAGCCTAAGG CTGAAAAGGT TCAGAAGTTT ATTGATTATG CTTTCGAGTTT TGGCTTGCGC	1860
ATTTATGGAA CTGCCAGTGA GATTAGTCAG GAGGCACTTC AAGACATCAT GCGTGCTGTT	1920
GAGGGAGAAC CTTATGCAGA TGTATTGTCC ATGATGCTTC TTCGCTCTAT GCAGCAGGCT	1980
CGTTATTTCGG AGCACAATCA CGGCCACTAT GGACTAGCTG CTGACTATTA TACTCACTTT	2040
ACCACTCCAA TTCGTCGTTA TCCAGACCTT CTGTGTCACC GTATGATTCTG GGATTACGGC	2100
CGTTCTAAGG AAATAGCAGA GCATTTTGAA CAAGTGATTC CAGAGATTGC GACCCAGTCT	2160
TCCAACCGTG AACGTCGTGC CATAGAAGCT GAGCGTGAAG TCGAAGCCAT GAAAAAGGCT	2220
GAGTATATGG AAGAATACGT GGGTGAAGAG TATGATGCAG TTGTATCAAG TATTGTCAAA	2280
TTCGGTCTCT TTGTGCAATT GCCAAACACA GTTGAAGGCT TGATTCACAT CACTAATCTG	2340
CCTGAATTTT ATCATTTCAA TGAGCGTGAT TTGACTCTTC GTGGAGAAAA ATCAGGTATC	2400
ACTTTCGGAG TGGGTCAGCA GATCCGTATC CGTGTGAAA GAGCGGATAA AATGACTGGA	2460
GAGATTGATT TTTCATTCTG ACCTAGTGAG TTTGATGTGA TTGAAAAAGG CTTGAAACAG	2520
TCTAGTCGTA GTGGCAGAGG GCGTGATTCA AATCGTCGTT CGGATAAGAA GGAAGACAAG	2580
AGAAAATCAG GACGCTCAAA TGATAAGCGT AAGCATTCAC AAAAAGACAA GAAGAAAAAA	2640
GGAAAGAAAC CTTTTTACAA GGAAGTAGCT AAGAAAGGAG CCAAGCATGG CAAAGGGCGA	2700
GGGAAAGGTC GTCGCACAAA ATAAAAAGGC ACGCCACGAC TATACAATCG TAGATACGCT	2760
AGAGGCAGGG ATGGTCCTGA CTGGAACTGA AATCAAGAGT GTACGAGCTG CTCGAATTAA	2820
TCTCAAGGAT GGCTTTGCTC AAGTGAAAAA TGGAGAAGTT TGGCTGAGCA ATGTTTCATAT	2880
CGCGCCTTAC GAAGAGGGCA ATATCTGGAA CCAGGAACCA GAACGTCGTC GTAAACTCCT	2940
GCTCCATAAA AAGCAAATTC AAAAATTGGA ACAAGAGATC AAAGGGACAG GAATGACCTT	3000
AGTTCCCTT AAGGTCTATA TAAAAGATGG CTACGCTAAG CTTCTTTTAG GACTTGCCAA	3060
AGGGAAGCAT GACTATGACA AACGGGAGTC TATCAAACGT CGTGAGCAAA ATCGAGATAT	3120
CGCGCGTGTG ATGAAAGCTG TTAATCAGCG ATAAAAAGAG GAATTGAAAA TGGAAAAATT	3180
AGTTGCCTAT AAACGCATGC CTTTGTGGAA TAAACAAACA ATGCCTGAAG CTGTTTCAGCA	3240

796

AAAGCACAAT ACAAAGTTG GGACTTGGGG GAAATTTACT GTCTTGAAGG GAGCTCTCAA	3300
GTTTATTGAA TTGACAGAAG AAGGGGAAGT TCTAGCTGAA CACCTCTTTG AAGCAGGGGC	3360
AGACAATCCA ATGGCCCAAC CTCAAGCCTG GCACCGAGTG GAAGCTGCCA CAGATGATGT	3420
GGAATGGTAC TTGGAATTTT ATTGTAAACC TGAGGATTAT TTTGCTAAAA AATACAATAC	3480
CAATCCTGTT CATTCAGAGG TCCTAGAGGC CATGCAGACA GTGAAACAAG GGAAAGCTTT	3540
GGATTTGGGT TGTGGTCAGG GGCCTAATTC TCTTTTCTA GCCCAGCAAG ATTTTGATGT	3600
GACGGCTGTA GATCAAAATG GACTAGCTCT TGAAATCTTG CAAAGCATTG TGGAGCAGGA	3660
AGATTTGAC ATGCCTGTTG GCCTTTACGA TATCAATTCA GCTAGCATTG AACAAGAATA	3720
TGATTTTATC GTTTCACAG TTGTTCTCAT GTTCTACAA GCGGACCGCA TTCCAGCTAT	3780
TATTCAAAAT ATGCAGGAGA AAACCACTGT TGGTGGTTAC AACCTTATCG TTTGTGCCAT	3840
GGACACGGAG GATTATCCTT GCTCGGTTAA CTTCCCATTC ACCTTTAAAG AAGGAGAACT	3900
GGCAGACTAT TACAAGGATT GGGAATTGGT TAAGTACAAT GAAAATCCAG GCCATTGCA	3960
CCGTCGCGAT GAGAATGGCA ATCGTATTCA ACTACGCTTT GCGACCTTAC TAGCTAAGAA	4020
AATCAAGTAA ACACACATGA AGATTAGGAA TTTTCTGAT CTTTTTCTT TTTTACGAAT	4080
GATATAGAAA AGGAGGGAAT TCATGTTTGT TGCAGAGAT GCTAGGGGAG AATTGGTAAA	4140
TGTGTTAGAG GATAAACTTG AGAAGCAAGC ATACACCTGC CCAGCTTGTG GAGGCCAGCT	4200
CCATTTGCGT CAAGGACCAA GTGTACGGAC GCATTTTGCC CATAAATCCT TAAAAGACTG	4260
TGATTTTTTC TTTGAAAATG AAAGTCCAGA ACACCTGGCC AATAAGGAAT CCCTCTATCA	4320
CTGGTTGAAA AAAGAGACAA AGGTTCAATT AGAGTACCCG CTTTCAGAAC TTAAACAGAT	4380
TGCGGATGTA TTTGTAAATG GCAATCTAGC TCTAGAAGTT CAGTGTAGTC CCTTGCCTCA	4440
GAAAGTCCTT AAAGAGCGAA GTGAGGGCTA TCGTAGTCAG GGTTACCAAG TACTGTGGTT	4500
GCTGGGTCAA AAAGTGTGGC TCAAGGAGCG TTTGACTCGT CTACAGCAAG GTTTTCTTTA	4560
TTTCAGTCAA AACATGGGCT TTTATGTTTG GGAATTAGAC AAGGAAAAAC AAGTTTAAAG	4620
ACTCAAATAC CTGATTTACC AGGATCTCCG CGGTAACTC CATTATCAAA TCAAGGAATT	4680
TTCTATGGT CAAGGTAGTT TATTGGAAAT ATTGCGTCTT CCCTATAAGA GACAAAAAAT	4740
ATCTCATTTT ACAGTTTCTG AGGACAAGGA CATCTGTCGC TATATCCGGC AACAACTTTA	4800
TTATCAAAAT CTCTTTTGA TGAAAGAACA AGCAGAAGCC TATCAAAAGG GAGAAAATAT	4860
CCTGACTTAT GGAAGTAAAG AATGGTATCC ACAAATTCGA CCAATAGTGG GCAAATTTT	4920
CCAGATTGAA CAAGACTTGA CTAGCTATTA TCAGCACTTT TATACCTATT ACCAAAAAAT	4980
TCCTCAAAAT GATTGGCAA AGCTTTATCC ACCAGCCTTT TATCAGCAAT ATTTCTTGAA	5040

797

AAATATGGTA GAATAGAAAG GATGGAGGAA TCTAATGGTA TTACAAAGAA ATGAAATAAA	5100
TGAAAAAGAT ACATGGGATC TATCAACGAT CTACCCAACT GACCAGGCTT GGGAAGAAGC	5160
CTTAAAGAT TTAACAGAAC AATTGGAGAC AGTAGCCCAG TATGAAGGCC ATCTCTTGGA	5220
TAGTGCGGAT AACCTACTAG AAATCACTGA ATTTCTCTT GAAATGGAAC GCCAGATAGA	5280
GAAGCTTTAC GCTTATGCTC ATATGAAGAA TGACCAGGAT ACACGTGAAG CTAAGTATCA	5340
AGAGTACTAT GCCAAGGCCA TGACACTCTA CAGCCAGTTA GACCAAGCCT TTTCATTCTA	5400
TGAGCCTGAA TTTATGGAGA TTAGCGAAAA GCAGTATGCT GACTTTTITAG AAGCTCAACC	5460
AAAGCTGCAG GTTTATCAAC ACTATTTTGA CAAGCTTTTG CAAGGCAAGG ATCACGTTCT	5520
TTCAACAGT GAAGAAGAAT TATTGGCTGG AGCTGGAGAA ATCTTTGGTT CAGCAAGTGA	5580
AACCTTCGCT ATCTTGACA ATGCGGATAT TGTGTTCCCT TATGTCCTAG ACGATGATGG	5640
TAAAGAAAGT CAGCTATCTC ATGGGACTTA CACACGTTTG ATGGAGTCTA AAAACGTGA	5700
GGTTCGCCCT GGTGCCTATC AAGCTCTTTA TGCGACTTAC GAACAATTCC AACACACCTA	5760
TGCCAAAACC TTGCAAACCA ATGTTAAGGT GCAAAATTAC CGTGCTAAAG TTCGTAACCTA	5820
CAAGAGTGCT CGTCATGCAG CCCTCGCAGC GAATTTTGT CCAGAAAGTG TTTATGACAA	5880
TTTGGTAGCA GCAGTTCGCA AGCATTGACC ACTCTTACAT CGCTATCTTG AGCTTCGTTT	5940
AAAAATCTTG GGGATTTTCA ATCTCAAGAT GTACGATGTC TACACACCGC TTTCATCTGT	6000
TGAATACAGT TTTACCTACC AAGAAGCCTT GAAAAAGCA GAAGATGCTT TGGCAGTCTT	6060
GGGTGAGGAT TACTTGAGCC GTGTTAAACG TGCCTTCAGC GAGCGTTGGA TTGATGTTTA	6120
CGAAAATCAA GGCAAGCGTT CAGGTGCCTA CTCTGGTGGT TCTTATGATA CCAATGCCTT	6180
TATGCTTCTC AACTGGCAAG ACAATCTGGA CAATCTCTT ACTCTGTTC ATGAAACAGG	6240
TCACAGTATG CATTCAAGCT ATACTCGTGA AACTCAGCCT TATGTTTACG GGGATTACTC	6300
TATCTTTTGG GCTGAGATTG CCTCAACTAC CAATGAAAAT ATCTTGACGG AGAAATTATT	6360
GGAAGAAGTG GAAGACGACG CAACACGCTT TGCTATTCTC AATAACTTCC TAGATGGTTT	6420
CCGTGGAACA GTTTTCCGCC AAACTCAATT TGCTGAGTTT GAACACGCCA TTCACCAAGC	6480
AGATCAAAAT GGGGAGGTCT TGACAAGCGA TTTCTTAAAT AAACTCTACG CAGACTTGAA	6540
CCAAGAGTAT TATGGTTTGA GTAAGGAAGA CAATCCTGAA ATCCAATACG AGTGGGCTCG	6600
CATTCCACAC TTCTACTATA ACTACTATGT ATATCAATAT TCAACTGGCT TTGCGGCCGC	6660
CTCAGCCTTG GCTGAAAAAA TTGTCCATGG TAGTCAAGAA GACCGTGACC GCTATATCGA	6720
CTACCTCAAG GCAGGTAAGT CGGACTATCC ACTTAATGTC ATGAGAAAAG CTGGTGTGTA	6780

798

TATGGAGAAG GAAGACTACC TCAACGATGC CTTTGCAGTC TTTGAACGCC GTTTAAATGA	6840
GTTTGAAGCC CTTGTTGAAA AATTAGGATT GGCATAAAAT GGTGGAATCG TATAGTAAGA	6900
ATGCTAACCA TAACATGCGT CGTCCTGTCG TCAAAGAAGA AATTGTAGAC TTGATGCGTC	6960
AGCGTCAAAA GCAGGTCACA GGTTTCTTGA AAGAATTGGA AGACTTTGCC CGCAAGGAAA	7020
ATATTCCTAT TATTCCCAT GAAACGGTGG CTTATTTCCG TTTTCTTATG GAAACCATGC	7080
AGCCTAAAAA TATTCTGGAA ATTGGGACGG CTATCGGTTT TTCAGCTCTC TTGATGGCTG	7140
AACATGCGCC AAATGCTAAG ATTACAATA TTGATCGTAA TCCAGAAATG ATTGGTTTGT	7200
CCAAGGAAAA TTTTGCCAG TTTGACAGTC GCAAGCAAAT CACTCTCCTA GAGGGAGATG	7260
CGGTGGATGT CTTATCTACA CTGACAGAGT CTTATGATTT CGTCTTTATG GATTCTGCCA	7320
AGTCTAAATA CATCGTCTTT CTGCCAGAAA TCCTCAAACA TTTGGAAGTT GGTGGTGTGG	7380
TTGTCTTGA TGATATTTT CAAGGTGGTG ATGTTGCCAA GGATATTATG GAAGTCCGTC	7440
GTGGTCAGCG AACCATTAT CGAGGCCTTC AAAAATTATT TGATGCAACC TTAGACAATC	7500
CAGAACTCAC CGCAACATTA GTGCCTTTAG GAGATGGTAT TCTCATGCTT CGTAAAAATG	7560
TAGCAGATGT TCAACTGTCT GAAAGCGAAT GATTTCAGA AAAATTTAAG AAAAATAGT	7620
AAAATAGATA GAGTAACACT TATCTCAAAG GAGTAGACAT GAAGAAAAAA TTATTGGCAG	7680
GTGCCATCAC ACTATTATCA GTAGCAACTT TAGCAGCTTG TTCGAAAGGG TCAGAAGGTG	7740
CAGACCTTAT CAGCATGAAA GGGGATGTCA TTACAGAACA TCAATTTTAT GAGCAAGTGA	7800
AAAGCAACCC TTCAGCCCAA CAAGTCTTGT TAAATATGAC CATCCAAAAA GTTTTTGAAA	7860
AACAATATGG CTCAGAGCTT GATGATAAAG AGGTTGATGA TACTATTGCC GAAGAAAAAA	7920
AACAATATGG CGAAAACTAC CAACGTGTCT TGTCACAAGC AGGTATGACT CTTGAAACAC	7980
GTAAAGCTCA AATTCGTACA AGTAAATTAG TTGAGTTGGC AGTTAAGAAG GTAGCAGAAG	8040
CTGAATTGAC AGATGAAGCC TATAAGAAAG CCTTTGATGA GTACACTCCA GATGTAACGG	8100
CTCAAATCAT CCGTCTTAAT AATGAAGATA AGGCCAAAGA AGTTCTCGAA AAAGCCAAGG	8160
CAGAAGGTGC TGATTTTGCT CAATTAGCCA AAGATAATTC AACTGATGAA AAAACAAAAG	8220
AAAATGGTGG AGAAATTACC TTTGATTCTG CTTCAACAGA AGTACCTGAG CAAGTCAAAA	8280
AAGCCGCTTT CGCTTTAGAT GTGGATGGTG TTTCTGATGT GATTACAGCA ACTGGCACAC	8340
AAGCCTACAG TAGCCAATAT TACATTGTAA AACTCACTAA GAAAACAGAA AAATCATCTA	8400
ATATTGATGA CTACAAAGAA AAATTAATAA CTGTTATCTT GACTCAAAAA CAAATGATT	8460
CAACATTTGT TCAAAGCATT ATCGGAAAAG AATTGCAAGC AGCCAATATC AAGGTTAAGG	8520
ACCAAGCCTT CCAAATATC TTTACCCAAT ATATCGGTGG TGGAGATTCA AGCTCAAGCA	8580

799

GTAGTACATC AAACGAATAG TCCAAATCAA TGAGTCAGGG AAAAACTCG ACTTCAGGAA	8640
AAAATGAAGC AAACATTCCC ACAATAAAAC GCATAGTACA AGGTTTGTAC TGCCCCCAA	8700
AAAGTTAGAC AATTAATTTA TCCGAAGGAT TTAGTTCTGT ATTGCACAGA GCTAAGTCCT	8760
TTTAGTTTTA TCTTAATTCT CTTATTGTTG TAATAATCAA TATAGTCTAT AATGGCTCGT	8820
TCCAATTGAT TAAGTGATTT AAATGTTTTC TCATAGCCAT AAAACATTTC GGATTTTAAA	8880
ATGCCAAAGA AAGATTCCAT CCTACCGTTG TCTTGGCTGT TGCCCTTACG TGACATGGAT	8940
GCTTGAATTC CCTTACTCTC TAGGAAGCGA TGATAAGAAT CGTGTGATA TTGCCAGCCT	9000
TGGTCACTAT GGAGAATCGT ATTCTCGTAG TGCTTCTCTT TGAATGCCTG TTCCAACATT	9060
AACGATCAAT CAATTTAATC ATGTACCTAA GATTAGAATT GTTTATCCCA AATTTATTTG	9120
AAAGCTTCTC TAAGCTATAT CCTTGTTTTC TAAGTTCATA GATCTGAACT TTATCATCAT	9180
AAGTTAATTT CATAATAAAA ACACCCCAAA AGTTAGATTT TTTCTGTCTA ACTTTTGGGG	9240
TGTAGTTCAT GTACACCTGA TATGATGCGT TTTATAATTT TAAAGACTTT TTGACCAGCC	9300
TCATTTTMTT AACTTGATAC TCAGTGAAAA GCAAAGATTA AACTAGGAAG CTAGCTGTAG	9360
GCTGCTCAAA GAACAGCTTT GAGGTTGTAG ATAAACTTG TGAGGTCACC AACATATATA	9420
ATGTGAAGCT GACGTGGTTT GAATAGATTT TAGAAGAGTA TGAGTCTGGA AGTTTAAATG	9480
GATAATGCAA GATTCCATAG AATGGGTAAG CTAGAGTTCT TATGTGAAGA GTTTGGGCAT	9540
AACTTTTAC CTTTTCCTCC CTACTCATCT TAGTATAGAA AAGTGAATCT GAAATAGTAC	9600
ATAACTGCTT CTAACAATTT CTTATAAATT GATTTAAATT CTCAAATCAT ATTATTCAGT	9660
TCTTATTTCA TTTTGTCTA CAATCCTGTT GAGAAGACAC GTGTTCATAT CAAAAGGTA	9720
TTGGCAAGTT GCAATACCTT TTTACGAGGC TCTGTTGTCT TATTTTGTGTT TCAACTGACT	9780
ATATCTCCTA TGGTCTAGT TCAGAAGGCT AGGCTATAAT TATGATTGAT AAGAAGTATC	9840
ATTCCAAGTA TTGGGAGTGA ATGTTTCAAA ATCATGGGTT TCTATAATGG TCAGGCTGGC	9900
ATTTGCTAGA CCGCCATCTT TACGAAGAAG TGGTCTTTTA TAGCCTAGGA GAGTACGAAG	9960
ACTGGCAGTA AGATTGGCGC CGTGTCGAC AATTAGAATA CGTTCAGCTG GACTATCTTT	10020
TAATGATTTG ATAAATGGA TGGTCCGTTG AGTTGTAATA TAGAGGGATT CGGCTCCGAA	10080
CATTCGAGTG TCAAATGAG CAAGATTGTA ACGAAAAGCC TGGATTGTTT GCGGGTAAAT	10140
AGCTTCCAAG GTTGCAATTT TCAAACCTTC TAACTTCCCA AGTTGCCATT CACGGAGATT	10200
AGGAACGATT TCTAAAGAAC AGGGGGTATA GAGTTGACTT TGGATAATCT CAGCAGATTT	10260
GACCGCTCGA GGTAATCAC TTGAATAAAT CTGATCAAAA GGAATTCCTT TGAGATACTG	10320

800

ACCAAGTCGT TTTAGGGTTT CAATGGATTC AGGAAGAAGA GGAGAATCAC CACTAGCACC	10380
TTGAAAACGA CCTTCTTGGT TCCAGAGGGT ACGACCCTGG CGGACAAAGT AGAGTTTCAT	10440
TACTTGATGT CCTCCAAAAT ATCTACAAAG TCTGCCTTTA CAAAGCTAGC CAAGTCTTGT	10500
GGCGCGACGA TAATGCTGTG TCCGACTTCG CCTGCAGAGA CAATCATTTG ATCCAAATCT	10560
AGAGCAATTT TATCGATAAA AATGGGATAA TTGTGTTTCT GACGAATTCC GACAGGATTA	10620
TTGGCTCCAT GAATGTAACC AGTTGTTTTT TCTAAGTCCT TTTGTGGAAT CATGCTCACT	10680
TTTTTATTGC CAGAAATTTT AGCTAGTTTC TTTTCAGACA AGTGCTGAGT GATAGGGACA	10740
ATTCGATAA TCGGTCCGGT CTTGTCTCCC AAAAGCGCCA AGGTTTTGAA AATCTGATCT	10800
CGTTCATAAC CTTGAGGAAG CTCCTCTTCT AGGGCATTGA TTTGAATCCC CTGATGAGGG	10860
ATAGCTGCTT TAGATAGGAT TTGTTCCACC AATGTTTTT TGATTTTAAC TTTTTTTGCC	10920
ATTATTTATA TTTATCCTCC AATTGACTCA TCCAAATACC AAGCCAGATT CCCAGCGCAA	10980
AGAAGAAGGC GATGATGACA TAACCGACAA GTGAAAGTCC TGTGTATTGG ATACTTTTTCAG	11040
CGTTTCCTGC ATTTGGAATT AAGATCAAAA GGGTACTTGA TAGGACGATA CCGATGATGA	11100
AATGATAGAC GAACTGTTTA CGGAGTTCTT CTAGTTCTCC GTCCGTCCAA GCGTAGGCCA	11160
CTTCTTCTTT CTTGCCTTTA CCTTTGGACA TCTTGTAAG AGGTGGGAGG GCAATATAGA	11220
CATGACCTGC CTCGACTAGC GGACGCATGT AACGGTAGAA AAATGTCAAG AGCAAGGTCT	11280
GGATATGGGC ACCGTCGGTA TCCGCATCG	11309

(2) INFORMATION FOR SEQ ID NO: 109:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5548 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

CCATAGTCTA ACAAGTCTTT GTAAAGGTTT ATCCCTGATT CATGTAAAGA TTGTGTAAAG	60
AATCAAAAAA AGCCACTTTT GAAAAATGGC TGCTCCTAAA AATAGCTTTA AAAATTATTA	120
GTCCTGTGCG AAAGATTGGT TAGGAAGAAA AATCGTGAAG CAACTGCCTC TGCCAAGCTG	180
ACTCGTCACC GTGACTTGGC CACCTAATAA TTGACTGAGT TCTTTGACAA TGGCAAGGCC	240
AAGACCAGTG CCACCAGTTT GTCTGCTTCG ACCTTTATTA ACTCGGTAAA AACGTTCAAA	300
AATACGATCC TGCTCTAATT GACTAATACC AATCCCTGTA TCTGATACAG AAATCTTAAT	360
GCCTTCGTTT ACCTTTTGGG TCTTGACCTC AATTTTCCC CCTTGTTTCTAG TGTAACGGAT	420

801

GGCATTGGAT AAAAGATTGA GTAAGATTTG GGAAAGTAAT TGACTATCTG ATACGAGGGT	480
GACATCATCT GGCACCTGCA CCTTTAGCTG TAAATCCTTC TTCTTGAGCT GAGGTTGCAA	540
GCTTTGAGTC AAATCCTGTA CAAATTTCTGC CAAAGAAAGG GTCGTCCATT GTATAGGCAT	600
TTGTTGAGCC TTAGATAAGG TAAGAAGATG CTCAACAATA TGCTCAAGAC GCAAACCTTC	660
TTTGTAATA ATGTCTAGAA AGTCATCCTT GAGCGCTTCT TCTTCAGCTG ACATCCCCTT	720
AATGGTTTCA GCAAAGCCCT TAATCGAAGT AACTGGTGTC CTCAATTCAT GGGAGGCATT	780
TGAGACAAAG GCTAAATTTA ACTTTTCATA AGTTCTAATC GTTGTAAAT CATATAGCAA	840
GACGAGCACA GCTTCCACAG ATTGGGTGGG GCTAAAAACG GGAAGTCTG TCACCTCTAA	900
AATCAAGTCA CCCTCATGAA ACCCACTTAC TTCTTGTTTT AACCTTGTTT TTTGATCAAA	960
GGCTTGGTGA ACTAAATTCC GAATATCCAT CCGTTTGAGG TCATCAAGTG AACTTATGTC	1020
GCCGTCCACA TCGGGAAAAT AATGAGGCAG AGAGCCACTG GATAATAACA TCTGACCTTG	1080
AGCGGAAACT AAAAACGTCC CCATGGTTAG GTGCGACAGA AGAACCTCCA TTGTTTCGGC	1140
TAGATCCTTG TATTGCTGAT CCTGTTGGGA GACTTTGGTT TTTAGGCCAG ACACATACTG	1200
AGCCAAAGAC TTAAAGTCTT CTTGCCCTTT TTCTAAAAAG TATTCACTAC TGGTCAAGAG	1260
AGGTTGGTGC AAGGTCTCAA AAGCAACTTC CCATTTCCAA AGGCAAAAGA GCCAGTAGCC	1320
ACCTAGTCCC AAAGAAAGGG CTAGAAGAAA GAGACCGATG CCTTTACTGA TCCAAGTTAA	1380
TGCCATCCCT GCAATCAGAA TGAGGCTAAC ACTTAGATTG ACTAGCCAAA ATTGAAGGTA	1440
GCGTTTCATC TATAACTCCT TGAACCTATA ACCATAACCC CGAATGGTTC GAATAAATTG	1500
AGGGGCTTTA GGATTGTCTT CAATTTTTTC CCTCAACTTA CCAATATGAA CGTCCACCAA	1560
ACGTGTTTCC TGCCCAAAGT CATACCCCA GATACGTTCC AAAAGACGCT CTCTAGTCAG	1620
TGTCATGTTG GGATGTTTCA TAAGATAGAG CAAGAGTTCA AATTCCTTTG GGGTCAAAC	1680
CAGTAACTTA TTCGCCTTGT AGACTTCATG ACGCTCAGGG TATACTTTCA AGGTCCCAAA	1740
TAGCCAAGAA TCGTCAGCGA TATTATCTGA ATCATCTCCT TCTTGTTCTC CTTTAGTTTCG	1800
CCTGAGGACA GCCTTGACAC GCGCCAGCAA TTCTCTAGGG CTAAAAGGCT TGGTCAGGTA	1860
GTCATCAGCC CCTAATTCCA AGGCCAAAAC CTTATCAAAT TCATCACTTT TCGCAGAAAC	1920
CATCATAATT GGAGTTTGA CGCCTTTGGC TCTCAGCCGC TTACAAACTT CCATGCCATC	1980
TAATTGTGGT AACATGATAT CAAGCAAGAT AAAATCAAAG GGTTCGTGTT CTGCCAAAGC	2040
TAAGGCCTTC CGTCCATTG TCACCAATTG AGTAGAAAAG CCTTCCTTAC TTAAATGGTA	2100
GTCAAGCAAT TTCAGAATGT GTTCTTCATC ATCCACTAAT AAGACTTGTT TTGTCATCTA	2160

802

TTATCTCCTA TTGGTAACAT TATAACACAA TTATCAGAAA TCCTAACATT GCTAAATCAG	2220
ATTAAATTTG CCTATCAAGA CTAGTATCTG GTCAAACGCT CAATCATCTC CTTGTGCTCT	2280
GGATAGGTCG CCAGTAGATC TACCCTTTCA AATAATTCAA AATCCTCAAA TTCAAAACCA	2340
GGAGCAACAA GACAAGAAAC CAGAGCATCA TCCTTATCAA CTGTGATCC CCAAATAGTG	2400
CCCTTAGGAA CACAGTAGTG AAGTTGTTGC CCTTGGATA TGTCCAGGCC TAAAGTGA	2460
GCTTCGTAGT GACCATCTGC TGTAATCATG TGAACAGTAA GTGGGGATCC TGCATGAAAA	2520
TACCAGATTT CATCTGCTGT CAATCGGTGA AAATGTGAAG GATTCGTTTC TTCTAATAAG	2580
AAATAAATAC TGGTATAAAG CGCCCTTCCC TTACCAGCAA GGTTTATAGT GTCTGAAGCT	2640
TTTTTTGTTT GTCTAAAATA GCCACCTTCA ATATGGGGAG CTAACCTAG AGTTCTTATC	2700
AAGTCTTCTT TATCCGTCGG AGCCAATGGG TTGAAGTAAC TCTTGTTCAA AGTGGTTTTA	2760
CGATTTCAAG AACTCCTCTC AGTTCTGAGG ACACGGTAAT GATTGATGCG ACGGAAGTAC	2820
AAATCAATCG CCCTAAAAAA AGAATTAGCG AATGATTCTG GTAAAAAAA TGCCACGCTA	2880
TGAAGGCTCA AGCGATTGTC ACAAGTCAAG GGAGAATTGT TTCTTTGGAT ATCGCTGTGA	2940
ACTATTGTCA TGATATGAAG TTGTTCAAAA TGAGTCGCAG AAATATCGGA CAAGCTGGTA	3000
AAATCTTGGC TGACAGTGGT TATCAAGGGC TCATGAAGAT ATATCCTCAA GCACAACTC	3060
CACGTAAATC CAGCAAATC AAGCCACTAA CAGTTGAAGA TAAAGCCTAT AACCATGCGC	3120
TATCCAAGGA GAGAAGCAAG GTTGAGAACA TCTTTGCCAA AGTAAAAACG TTTAAAATGA	3180
TTTCAACAAC CTATCGAAAT CATCGTAAAC ACTTCGGATT ACGAATGAAT TTGATTGCTG	3240
GCATTATCAA TCATGAACTA GGATTCTAGT TTTGCAGGAA GTCTATTATT TGGTTAGGTG	3300
AATTAGTGAA GCGTTTAGGC AAGTGTCTCT GGTACGACG TCATGGACTC TAAATCGATT	3360
ATATTTAGGG GTCATGACTA GTGAAGCAGT TAGCTAGTTC GCATATAAGC GGCTAGCGTC	3420
TAACAATTAG GAACTTTAGT TCCAATAACT TTAAGATTAC GACGTTTTAG GACATAAATC	3480
GATCATATTT ATGTCCTAAA ACTAGTGAAG CGCCTAGCCA AAGTCCGAAT AGGATTTGGC	3540
GTAGTTACT TAGATTGCTT TGCAATCAAG TAACTTTGGC GATTTACATC TTCTCTGGCG	3600
CTTCTACTCC AAGCAAGCGA AGGGCTTCTT TGAGAACGAC TCGGTTGCG TAGCTGAGGG	3660
CTAGACGGCT GTCGCGTTCT GGGCTTTCAT CCAAGATACG TGTATGTGCA TAGTATTTGT	3720
TAAAGGATTG AGCCAGGCTA ATTGCAAAT TAGCAATGAT AGAAGGTTCA AAGTTATCTG	3780
CCGCACGGTT GATAATACGT GGGAAGTCTT GAATGAGTTT AATGATTTCC CAGCTTTCAG	3840
TATCATTCAA GCTATAGTTG CCAGCTGTTT CTGGTTTGAA ATCGGCTTTC CGTAAGATAG	3900
ATTGGATACG AGCGTAGGCA TATTGAACGT AAGGTCCAGT TTCACCCTCG AAGGATACCA	3960

803

TAGCCTCTAG GTCGAAGTCG TATCCATTG TACGGTCGGT TTTGAGGTCA TAGAATTTAA	4020
TGGCTCCAAT CCCAACAGCA TGTGCTACTT GGTCTTTGTT TTCTAGTTCA GGATTTTGTAG	4080
CCTCGATTG GACCTTGGCA CGGCTAACAG CCTCTGCAAC AGTAGGCTCT AGCAAGATGA	4140
CATTCCCTTT ACGAGTAGAG AGTTTCTTCC CTCTTTTGT AACCAAACCA AAAGGAACGT	4200
GAGTAATGTC GTCACTCCAG TCGTAGCCCA TCTCTTGCAA GACAGCTTTG AGCTGTTTAA	4260
AGTGGGCAGA TTGTTCTTGA CCAACGACAT AGATAGATT AGCAAATTGG TATTCGTTTT	4320
TACGGTAGAG GGCTGCAGCC AAGTCACGTG TGATATAGAG AGTTGCACCA TCAGACTTCT	4380
TGATGAGGGC TGGATGTTCA ATTCCATATT TCTCAAGATT CACAACCTGG GCACCTTCTG	4440
ATTCAAGAAG TAGTCCTTTT TCAGAAAGAA TGTCTACAAC TGCATCCATC TTATCATTTG	4500
AGAAGGCTTC TCCGTATAG CTGTCAAATT CAACCTTCAA TTCATTGTAA AGGCGGTTAA	4560
ATTCCACTAA ACTTTCATCG CGGAACCATT GCCAAAGAGC GAGAGCTTCC TCATCTCCAT	4620
TTTCAAGTTT ACGGAACCAT TCGCGCGCTT CTTTCATCCAA GCTAGGGTCA TTTTCAGCTT	4680
CAGCGTTGAT GCGGACATAG AGTTTAAGGA GTTCATCGAT TGGATGAGCT TTTACAGCTT	4740
CTTCGTCGCC CCATTTTTTG TAGGCAACAA TCAACATCCC AAATTGTTTA CCCCAGTCTC	4800
CCAAATGGTT GACCTTGACC GTTTGATAAC CGATTTTTTG GAAAATATGT GACAAGCTAT	4860
CTCCGATAAC AGTTGAACGC AGGTGGCCAA TAGAAAATGG TTTAGCGATA TTCGGACTAG	4920
ACATGTCGAT AACAAACATT TCTTGTTTAC CAATATTTTG GTCAGCATAG TGTCTTTTTT	4980
CAGTGGTAAC AGCTTGCAAT ACTTGAGCAG AAATGGCAGA TTTATCAAGG AAAAAGTTAA	5040
CGTAAGGTCC TGTGCGACA ACTTTTCAA AGGCTTGGCT GTTCATTTTT TCAGCCAGTT	5100
CAGCCGCAAT CATTTGTGGT GCTTTACGTT CGACTTTTGC AAGAGAAAAA GCAGGGAAAG	5160
CAATGTCTCC CATTTCTGAG TTTTAGGGG TTTCCAGTAA CTTTAAAATA GCCTCTTGGT	5220
CCAGGCTATC AATGATGCTA GATAATCGC TAGCAATCAA TTCTTTTGTA TTCATTAAGA	5280
GCTCCTTTTT GGACTTTTCT ACTATTTTAT CACAATTTTA AAGAAAGAAG AAAAAATTTT	5340
TGAAATCTCC TGTTTTTTTG GTATAATATG GTTATAAATA TAGTTATAAA TATGCACGCA	5400
AGAGGATTTT ATGAGAAAAA GAGATCGTCA TCAGTTAATA AAAAAATGA TTAGTGAGGA	5460
GAAATTAAGT ACACAAAAAG AAATTCAAGA TCGGTTGGAG GCGCACAATG TTTGTGTGAC	5520
GCAGACAACC TTGTCTCGTG ATTTGCGG	5548

(2) INFORMATION FOR SEQ ID NO: 110:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 3132 base pairs

804

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

TACCCGGTAG TCTTAGCAGA CACATCTAGC TCTGAAGATG CTTTAAACAT CTCTGATAAA	60
GAAAAAGTAG CAGAAAATAA AGAGAAACAT GAAAATATCC ATAGTGCATAT GGAAACTTCA	120
CAGGATTTTA AAGAGAAGAA AACAGCAGTC ATTAAGGAAA AAGAAGTTGT TAGTAAAAAT	180
CCTGTGATAG ACAATAACAC TAGCAATGAA GAAGCAAAAA TCAAAGAAGA AAATTCCAAT	240
AAATCCCAAG GAGATTATAC GGACTCATTT GTGAATAAAA ACACAGAAAA TCCCAAAAAA	300
GAAGATAAAG TTGTCTATAT TGCTGAATTT AAAGATAAAG AATCTGGAGA AAAAGCAATC	360
AAGGAACTAT CCAGTCTTAA GAATACAAAA GTTTTATATA CTTATGATAG AATTTTAAAC	420
GGTAGTGCCA TAGAAACAAC TCCAGATAAC TTGGACAAAA TTAAACAAAT AGAAGGTATT	480
TCATCGGTTG AAAGGGCACA AAAAGTCCAA CCCATGATGA ATCATGCCAG AAAGGAAATT	540
GGAGTTGAGG AAGCTATTGA TTACCTAAAG TCTATCAATG CTCCGTTTGG GAAAAATTTT	600
GATGGTAGAG GTATGGTCAT TTCAAATATC GATACTGGAA CAGATTATAG ACATAAGGCT	660
ATGAGAATCG ATGATGATGC CAAAGCCTCA ATGAGATTTA AAAAAGAAGA CTTAAAAGGC	720
ACTGATAAAA ATTATTGGTT GAGTGATAAA ATCCCTCATG CGTTCAATTA TTATAATGGT	780
GGCAAAATCA CTGTAGAAAA ATATGATGAT GGAAGGGATT ATTTTGACCC ACATGGGATG	840
CATATTGCAG GGATTCCTGC TGGAAATGAT ACTGAACAAG ACATCAAAAA CTTTAACGGC	900
ATAGATGGAA TTGCACCTAA TGCACAAATT TTCTCTTACA AAATGTATTG TGACGCAGGA	960
TCTGGGTTTG CGGGTGATGA AACAATGTTT CATGCTATTG AAGATTCTAT CAAACACAAC	1020
GTTGATGTTG TTTCGGTATC ATCTGGTTTT ACAGGAACAG GTCTTGTAGG TGAGAAATAT	1080
TGGCAAGCTA TTCGGGCATT AAGAAAAGCA GGCATTCCAA TGGTTGTCGC TACGGGTAAC	1140
TATGCGACTT CTGCTTCAAG TTCTTCATGG GATTTAGTAG CAAATAATCA TCTGAAATG	1200
ACCGACACTG GAAATGTAAC ACGAACTGCA GCACATGAAG ATGCGATAGC GGTCGCTTCT	1260
GCTAAAAATC AAACAGTTGA GTTTGATAAA GTTAACATAG GTGGAGAAAG TTTTAAATAC	1320
AGAAATATAG GGGCCTTTTT CGATAAGAGT AAAATCACAA CAAATGAAGA TGGAACAAAA	1380
GCTCCTAGTA AATTAAATTT TGTATATATA GGCAAGGGGC AAGACCAAGA TTTGATAGGT	1440
TTGGATCTTA GGGGCAAAAT TGCAGTAATG GATAGAATTT ATACAAAGGA TTTAAAAAAT	1500
GCTTTTAAAA AAGCTATGGA TAAGGGTGCA CGCGCCATTA TGGTTGTAAA TACTGTAAAT	1560

805

TACTACAATA GAGATAATTG GACAGAGCTT CCAGCTATGG GATATGAAGC GGATGAAGGT	1620
ACTAAAAGTC AAGTGTTTTC AATTTTCAGGA GATGATGGTG TAAAGCTATG GAACATGATT	1680
AATCCTGATA AAAAACTGA AGTCAAAAGA AATAATAAAG AAGATTTTAA AGATAAATTG	1740
GAGCAATACT ATCCAATTGA TATGGAAAGT TTTAATTCCA ACAAACCGAA TGTAGGTGAC	1800
GAAAAGAGA TTGACTTTAA GTTTGCACCT GACACAGACA AAGAACTCTA TAAAGAAGAT	1860
ATCATCGTTC CAGCAGGATC TACATCTTGG GGGCCAAGAA TAGATTTACT TTTAAAACCC	1920
GATGTTTCAG CACCTGGTAA AAATATTAAA TCCACGCTTA ATGTTATTAA TGGCAAATCA	1980
ACTTATGGCT ATATGTCAGG AACTAGTATG GCGACTCCAA TCGTGGCAGC TTCTACTGTT	2040
TTGATTAGAC CGAAATTAAA GGAAATGCTT GAAAGACCTG TATTGAAAAA TCTTAAGGGA	2100
GATGACAAAA TAGATCTTAC AAGTCTTACA AAAATTGCCC TACAAAATAC TGCGCGACCT	2160
ATGATGGATG CAACTTCTTG GAAAGAAAAA AGTCAATACT TTGCATCACC TAGACAACAG	2220
GGAGCAGGCC TAATTAATGT GGCCAATGCT TTGAGAAATG AAGTTGTAGC AACTTTCAAA	2280
AACACTGATT CTAAAGGTTT GGTAAACTCA TATGGTTCCA TTTCTCTTAA AGAAATAAAA	2340
GGTGATAAAA AATACTTTAC AATCAAGCTT CACAATACAT CAAACAGACC TTTGACTTTT	2400
AAAGTTTCAG CATCAGCGAT AACTACAGAT TCTCTAACTG ACAGATTAAA ACTTGATGAA	2460
ACATATAAAG ATGAAAAATC TCCAGATGGT AAGCAAATG TTCCAGAAAT TCACCCAGAA	2520
AAAGTCAAAG GAGCAAATAT CACATTTGAG CATGATACTT TCACTATAGG CGCAAATCTT	2580
AGCTTTGATT TGAATGCGGT TATAAATGTT GGAGAGGCCA AAAACAAAAA TAAATTTGTA	2640
GAATCATTTA TTCATTTTGA GTCAGTGGAA GCGATGGAAG CTCTAAACTC CAGCGGGAAG	2700
AAAATAAACT TCCAACCTTC TTTGTGCGATG CCTCTAATGG GATTTGCTGG GAATTGGAAC	2760
CACGAACCAA TCCTTGATAA ATGGGCTTGG GAAGAAGGGT CAAGATCAAA AACACTGGGA	2820
GGTTATGATG ATGATGGTAA ACCGAAAATT CCAGGAACCT TAAATAAGGG AATTGGTGGA	2880
GAACATGGTA TAGATAAATT TAATCCAGCA GGAGTTATAC AAAATAGAAA AGATAAAAAAT	2940
ACAACATCCC TGGATCAAAA TCCAGAATTA TTTGCTTTCA ATAACGAAGG GATCAACGCT	3000
CCATCATCAA GTGGTTCTAA GATTGCTAAC ATTTATCCTT TAGATTCAAA TGGAAATCCT	3060
CAAGATGCTC AACTTGAAAG AGGATTAACA CCTTCTCCAC TTGTATTAAAG AAGTGCAGAA	3120
GAAGGATTGA TT	3132

(2) INFORMATION FOR SEQ ID NO: 111:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14672 base pairs

806

(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

CGAGATTTCT TTAAATGAAC TACGTGAAAT CTACCCATCA TCCAGATCTG GATATTCTCT	60
CCTATCTATA AGTAAAGTTT TAGGAGATTT TAATATAAGT TCTCATGCTT TTAAAGCTTC	120
GGTAAGAGAT TTAACCCGC TCAGTTTCCC ACTCATTGCG TTCTGGGAGA GTTCTCATT	180
TATTATTCTT GAAAAAATTA GTAAAAACAA GTTTTATATT TTAGATCCTG CAAAAGGCAG	240
GCAGAGAATG TCAATAAGTG AATTGAAAG GCATTATTCA AATATCATTT TAACATTAA	300
AAAGTTAGAT AGCTTTATGT CTCGTAAAGA TAATAAGAAG TCGCCTGTTT TAAAGTATTT	360
TTTTAAGTAT AGGAATAAGC TAGGGATTTT ATTTTGTGTA ACAGCATTAT TGTATGTAAT	420
ACAATCATTA GTACCTATAG CTAATAGATA CATAATTGAC ACGAATTTCAG AGGACGATTC	480
GTATTCGTCT AGAATGTTAT TTAATATATT ATTTATATTT ACTGTTTCAT TCTCACTAAT	540
GTATTTATTA AGACAGATAT ATGTTGCATC CTTAAATAT ATAATGGATA AAGAGATTAG	600
CTATGATTTT ATGAAACATT TGATATATTT ACCTTACAGT TTTTATGAAA AACGTACTTT	660
AGGGGATATA CTTTTAGAG CTAATCTCTAT TGTTTATATA AGAGAAATAC TATCAAATAA	720
TTTTATAGCA GCTATACTTG ATTTGTTAAT GATTGTGGTT TATGCTGTGG TTTTATTAG	780
CTTTTCTAAG TACATGGTAA TCTTTTAAAT ATCACTAAGT CTAGCTCTAT CTATTGTAAT	840
GTATCCAATC ATAAAAATCT CAAAAATTT AATTGATAAA AATATAAAG AAAAGGTTAA	900
TGTTCAAAAT ATTACTTCCG AAGTAATTTC TAAAAATAGT GATATTAAGC TAACTGGAGA	960
AGAGGAATTT TGGATTAAAC AATGGGATAA TTTTAATACA AAACAGCTCA TCATAGGTCG	1020
AAAATTTGAT ATACATTTAT CAATTGTTAG TAGTATAACG AATGTTTTC AAATTATTCT	1080
CCCTGTTTGG ACCCTTATTG TAGGTGTAAA TATAAAAACA TTCGAACAAT TGACGTTAGG	1140
ACAAATTGTA GCAATAAGTA CAGTCTCACC ATACTTTATT TCTCCTATAA TTTCTTTAAG	1200
TGATAACTAT ATACAATTAA TGTATTAAA GGGATATTTT TTAAGAATAG AGGATGTGTT	1260
TAATACTAAA TCCGAATTAA TTCCAGAAAG AGTCAGTCAA GATATAAAAT TTGATAAAAA	1320
AATAGAATTA AAAGATATTT GGTATAAATA TGGATTATTT GATGATTATG TTTTGAAAGG	1380
AATAAATGTT ACTATTAAAA AAGGAGAAAC TGTGCTATT GTTGGAGAAT CAGGTTTCAGG	1440
TAAGAGTACA TTAGCTAAAA TTTTATTAGG TTTATTAGAA CCTAATATTG GTTCAATAGA	1500
AGTTGATGGA GTAGAAAAAG AAGAAATGG TCAAACATTG TATAGAAAGA TTTTGGAGC	1560

807

AGTGTTACAA AATTCAACCC TAAGTTATGG TACCTTAAGA GAGAATTTGA CATTTGGACA	1620
CTTTGTTTCA GATGAAGAAT TAATGACAAA TCTAAATTC AATTGGTCTTA GCAATGTAGT	1680
TAAATCTTTA CCTCTTGGAT TAGAGACAAT CATCGCTGAA GAAGGTAATA ACTTTTCTGG	1740
AGGGCAGCAG CAAATGATAC TTTTAGCTCG TTGTCTTTTG TCGAAACCTT CGGTAGTTGT	1800
TTTGGACGAA GCAACAAGTA GTTTAGATAA TTTATCTCAA CAAATTACAA CTTCTTACTT	1860
AAGTGAAATC GGTACCACTA AGATTTTAAT TGCCCATCGA CTAGATACTA TCAAGTCTGC	1920
AGATAAGATC TTAGTAATGC ATAATGGTGA AATTGTAGAG ATTGGGACCC ATAGAGAATC	1980
TCTTGAACTA GGAGGCATTT ATAAGCAATT GTATTCAAAT AATTAGTTTT TGATTAAAAG	2040
GGTAAATTTA TGAAGATTAT GAAAAAAAAA TATTGGACTT TAGCGATATT ATTCTTTTGT	2100
TTGTTCAATA ATTCTGTTAC TGCTCAAGAA ATACCTAAAA ATCTTGATGG CAATATAACT	2160
CACACTCAGA CTAGCGAAAG TTTTCTGAA TCTGATGAAA AACAGGTGA CTATTCTAAT	2220
AAAAATCAAG AAGAAGTAGA CCAAAATAAA TTTCTGATTC AAATCGATAA GACAGAATTA	2280
TTTGTAACAA CAGATAAACA TTTAGAAAAA AACTGTTGTA AATTGGAACT TGAACCACAA	2340
ATAAATAACG ATATTGTTAA CTCTGAAAGT AATAATTTAC TAGGCGAAGA TAATTTAGAT	2400
AATAAAATTA AGGAAAATGT TTCTCATCTA GATAATAGAG GAGGAAATAT AGAGCATGAC	2460
AAAGATAACT TAGAATCGTC GATTGTAAGA AAATATGAAT GGGATATAGA TAAAGTTACT	2520
GGTGGAGGCG AAAGTTATAA ATTATATTCT AAAAGTAATT CTAAAGTTTC AATTGCTATT	2580
TTAGATTTCAG GAGTCGATTT ACAAATACT GGATTACTGA AAAATCTTTC AAATCACTCA	2640
AAAACTATG TCCCAATAA AGGATATTTA GGAAAAGAGG AGGGAGAGGA AGGAATAATA	2700
TCAGATATTC AAGATAGATT AGGTCATGGT ACGGCTGTTG TAGCTCAAAT TGTAGGGGAT	2760
GACAATATTA ATGGAGTAAA TCCTCACGTT AATATTAACG TCTATAGAAT ATTTGGTAAG	2820
TCGTCAGCTA GTCCAGATTG GATTGTAAAA GCAATTTTTC ATGCTGTAGA TGATGGCAAT	2880
GATATTATCA ATCTTAGTAC TGGACAATAT TTAATGATTG ATGGAGAATA TGAGGACGGA	2940
ACAAATGATT TTGAAACATT TTTGAAGTAT AAAAAGGCTA TTGATTACGC GAATCAAAAA	3000
GGAGTAATTA TAGTAGCTGC ATTAGGGAAT GACTCCCTAA ATGTATCAAA TCAGTCAGAT	3060
TTATTGAAAC TTATTAGTTC ACGCAAAAAA GTAAGAAAAC CAGGATTAGT AGTTGATGTT	3120
CCAAGTTATT TCTCATCTAC AATTTCGGTC GGAGGCATAG ATCGCTTAGG TAATTTATCA	3180
GATTTTAGCA ATAAAGGGGA TTCTGATGCA ATATATGCGC CTGCAGGCTC AACATTATCT	3240
CTTTCAGAAT TAGGACTTAA TAACTTTATT AATGCAGAAA AATATAAAGA AGATTGGATT	3300

808

TTTTCGGCAA CACTAGGAGG ATATACGTAT CTTTATGGAA ACTCATTTGC TGCTCCTAAA	3360
GTTTCTGGTG CGATTGCAAT GATTATTGAT AAATACAAAT TAAAAGATCA GCCCTATAAT	3420
TATATGTTTG TAAAAAATT CTGGAAGAAA CATTACCAGT AAAAAATGGT ATAAAAGTGT	3480
TAAATATACC AAACGTATTG AGATATGATT TGAATATGTT ACAATTAGAA TATAAAAATG	3540
AACAAAGTTG GGATAGTTTC ATAGATAATG TTAATTTAAT TGAGTTGGAA GAGAGAATTC	3600
AAACTACTAT TGGAATTAAA CAAATAAACA CACACAATAT TATTACTATT GCCCGAGAAG	3660
GGTACTCTCA AAATTATTTA CCTAACACTT CAGAAAATAC ATATAATTCA TTACAAGTCA	3720
GTTTAGTTGG AGTATTACTA CTTTTTATAA GTATGGTAAA TATTTTATGG GCTAAAAAAA	3780
GTAAATGAAA ATAAATTTG GAGCCCTCTG AAAAAAGTAAG TCCTACAGTT CAACTAAAAAT	3840
GAGTCAAAAG ATGAATCACC TTGATGTAGG GGAGTTTGTC TTATTGCTGC CTGAACACCT	3900
CCGTTTCAGAG GAAGAACATT ATAAATCTGT TTTTGAAGAC GACTTAACCA GTCGCATATC	3960
TAGTCAAGAT GAACGACAGC AAATGACTGC TACGGTAGGT TATTTAGAAT CAGGTCAGGA	4020
TCGTTTGTG TATAATACGA CCCCTATTTT TTACCAGCAG TTTTGTGAAAG ATCCAATCAT	4080
CATTGTATA ACACCCCAAT CAACTGGTCC ACAGTCCATT TTGTTTGGGA TAGACGCAGT	4140
ACAGAACTAC GTTCTCTTTA ATCAATGTGC TGATGCCCAG GAGCTTATCC AGAGACAAGG	4200
CATTGAAAAAT TGGGTCTCAG AAATGCAAAC AGGTTACCAC AACTACATCA CATTATTGGA	4260
TAATATCCAG AGGGAACGTT GGGTAATGCT AGCAGGAGCT GTGCTTGGGA TTGCAACTTC	4320
AATCTTGTG TTTAACAATA TGAATAGGCT CTACTTTGAA GAATTTAGAC GTGCCATTTT	4380
TATCAAACGC ATTGCAGGTC TCAGGTCTTT AGAAATCCAT CGCACTTATC TCTTTGTCTA	4440
ACTGGGTGTG TTTTACTGG GATTTGTTGC GAGTGTATTT CTTCAGGTAG AGATAGGAGT	4500
TGCTTTCTTA GTCTTGTTAC TCTTTACTGG TCTATCTCTT TTACAGTTAC ATGTCCAAAT	4560
GCAGAAAGAA AACAAGATGT CCATGCTTGT TTTGAAGGGA GGTTAATATG ATTGAACTTA	4620
AACAGGTGAG TAAATCTTTT GGAGAACGAG AGTTATTTTC GAATCTTTCA ATGACATTTG	4680
AGGCTGGAAA AGTCTATGCC TTAATTGGTT CAAGTGGTAG CGGAAAAACA ACCTTGATGA	4740
ACATGATTGG GAAATTAGAA CCTTATGATG GGACGATTTT TTACCGAGGT AAAGACTTGG	4800
CCAATTATAA ATCAAGTGAT TTTTCCGTC ACGAATTGGG CTACCTCTTC CAGAACTTTG	4860
GCTTAATTGA AAACCAAAGT ATTGAAGAAA ACCTTAAGCT AGGTCTCAT TGGTCAAAAGT	4920
TGAGTCGGTC GGAACAGCGG TTGAGGCAGA AGCAGGCTTT AGAACAGGTC GGCCTGGTTT	4980
ATCTTGACCT AGATAAGCGC ATCTTTGAGT TATCGGCGG AGAATCGCAA CGGGTTGCCT	5040
TGGCAAAAAT TATCTTAAAG AATCCACCC T TATTCTGGC AGATGAGCCA ACAGCTTCAA	5100

809

TAGACCCAGC AACCTCTCAG TTGATTATGG AGATTTTGCT ATCTCTTCGA GATGATAATA	5160
GGCTAATCAT TATCGCAACA CATAATCCGG CAATTTGGGA GATGGCTGAT GAAGTGTCA	5220
CGATGGATCA TCTGAAATAA AAATCCTTGT TTTTAATTGC ACGATGAGTT ACTGAAATAT	5280
TATCATGAAT CAAGAATTGG AGTTAATTTA GAATTGTA CT TAATTTAGAA TTGTACTTTA	5340
TTAATATTGA GGTAACTTT TCTTGATAAA GGAAGAAATA ATGGAGAGGA AGTTAGAATG	5400
AAAAAATTCG ACAATTATAT TATTGAGAAG CCTTGCGATT CTAATTCAGA TAACTGCAA	5460
AAAATCTTAA TAATTGAAAG TTTGGTAGAT GATATTTTGC AATTTTCTCT CAGAATCAAT	5520
AATAGTGTAG GAGAGATTTT CCTCCTACAA CCGTTTTAAA AGAAAACTAT CTTTATTCCA	5580
TGTTATTTTG AGGAAGATAT TGTGAAAGTC AAAGATGATG ATAAAGTTGA GTGGAATTTG	5640
TTAGAATTTT AAAAATTTAG AGCATTTTTG GCTTAGTAAT CTGTGTTGAA GGCTCAAAAC	5700
CTATGGTAAA AAAGTAGCTT TGAACGTA TTGCCTCCAA AGATTTAGTT AAATAATGAT	5760
TTAACACAAA AAGAAATTAT TGAAGTCTG GAAAGATGTT GTTTCAGTAT TGAGAAAAGG	5820
TGGGAAAAAC TTGCGATTTT CACAGAGAAA GGAAGAAAAA GTATAGAAAT ATAGTCAATT	5880
GAAACAAGAA CAGGATAAAA GAACCTTTTG TGCCATATTT TTCTCCTTTC GCTTTACAAT	5940
TGGATTGAAC ACCTTTATTT TATCGCGTTT GGAGTTTTTT TGGTATAACC TTCGACGCAC	6000
ACCCGCATAG CGGGTGTMTT TTTTGTCTCG CACCTAACGG AGCGAGACAA ACTAATAGTC	6060
ACTTAATCAA AAAACGCACC ATATCAAAAA CTAAGAGTT TGATATCATG CGTCATGTCT	6120
TAAACTAATT GACTATACTT TCTATTCAAA TGAGCTTTTA ACCAATTGAT TGAGCCAATC	6180
CACTCTTAAA ACCAAAGAGC AATTTCTCGC TTAGCTGACT CTTCTGAATC TGAACCATGT	6240
ACAACATTTT GGATAATCTC ATTTTCTCCA GCAGCTTTTG CAAAATCACC TCGAATAGTG	6300
CCTGGTAAAG CTTCTTCTGG ACGAGTTGCA CCCATCATGG TCCGCCAAGT TTCGATTACT	6360
TTGGGACCAG AAATGACACC CACAAGAACT GGACCTGAAG TCATGAATTC ACGAATCGGT	6420
GGGTAAAAAC TCTGACCAAC CAAGTCCTGA TAGTGCTGGT CAATCAACTC TTCTGAAACC	6480
TGTGAACGAA ACTCCAATTT TTCGATTGTA AATCCACGTT GTTCGATGCG CTTTAACACT	6540
TCACCCACTA GCCCTCTTTT TACACCATCT GGTTCGATGA TAAAGAATGT TTGTTCCATA	6600
CCCGTCTCCT TTGTCAGCTT CTTTCTTTTA TTTTACCACA TTTCGTGGAA AAATGGAGAA	6660
AGTTTTTCAGA AGAGAGAATG AGAGAACCCT CGGGTTCTCT CATTTCTCTT TATTCTACTG	6720
TTTCTTCCAC AGTTTCAACG GCAGTATCCA CAACTACTTC TGTGTTTCT TCATTTCTCT	6780
CTTCCTCTAC TGGAGGATTA AGGTATTCTT CTTGCTTGAC AGCATGTGGT TCAAGGTTAC	6840

810

GGTAACGGGC	CATACCAGTA	CCAGCTGGGA	TGATCTTACC	GATGATAACA	TTTCTTTAA	6900
GTCCAAGGAG	ATGGTCTTTC	TTACCACGGA	TAGCTGCGTC	AGTAAGGACA	CGAGTTGTTT	6960
CCTGGAAGGA	AGCCGCTGAC	AAGAACTGT	TTGTTTCAAG	TGAGGCTTTG	GTAATTCCCA	7020
TAAGGACTGG	GCGACCTGTC	GCTGGAACTC	CACCTGCGAT	AAGGACATCT	TTGTTGGCAT	7080
CTGTAAAGTC	ATTGATATCC	ATGAGGGTAC	CCATGAGAAG	ATCTGTATCA	CCTGGATCCA	7140
TGACACGGAC	TTTACGGATC	ATTGACGAA	CCATTACCTC	GATGTGTTTG	TCACCGATT	7200
CTACCCCTTG	GCTACGGTAA	ACTTTTGTGA	CTTCACCGAG	AAGGTACGTT	TCAACTGACA	7260
AGACATCACG	AACTGCAAGG	AGACGTTTGT	GTTGGATAGA	ACCTTCTGTC	AGAGCAGCAC	7320
CACGCGCTAC	TTGGCCCCCA	ACTTCGACAC	GCATACGAGC	TGTAAATGGA	ACGACATATT	7380
CACCTTCGCC	AGTTTCACCC	TTAACAAAGA	CTTCTTGGT	ACGAGTTGAT	GCATCTTCTT	7440
CGATAGCAGT	AACTTGTCTT	TTAACCTCTG	TAATAACCGC	TTCCCTTTTA	GGATTGCGGG	7500
CTTCAAAGAT	TTCTTGGAACA	CGAGGAAGAC	CCTGAGTGAT	ATCGGTATTT	GAGGCAACCC	7560
CACCTGTGTG	GAAGGTACGC	ATTGTAAGCT	GTGTACCAGG	TTCCCCGATA	GATTGGGCAG	7620
CGATTGTACC	AACTGCTTCA	CCAACTTCAA	CCGCATCACC	AGTCGCCAAG	TTGATACCGT	7680
AACAGTGACG	GCAGACACCG	TGACGAGTGT	TACATGTAAA	TACAGAACGG	ATAGTCACTT	7740
CTTCCACACC	AGCATTGACA	ATTTCACGCG	CCTTGTCTTC	TGTAATCAAT	TCATTTGGAC	7800
CAATAATCAC	TGCACCAGTT	TCTGGATGTT	TAACAGTTTT	CTTAGTGTA	CGACCGTTGA	7860
GACGCTCTTC	GAGAGACTCG	ATCATCTCTT	TTCCTTCTGC	GATAGAACGG	ATCAAGAGAC	7920
CACGGTCAGT	TCCACAGTCG	TCCTCACGGA	TGATAACGTC	TTGGGCAACG	TCGACCAAAC	7980
GACGAGTCAA	GTAACCTGAG	TCGGCTGTCT	TAAGGGCCGT	ATCGGTCATA	CCTTTACGAG	8040
CACCGTGAGT	TGAGAAGAAC	ATTTCOAATA	CCGACAAACC	TTCCGCGAAG	TTTGAAAGGA	8100
TTGGCAATTC	CATGATACGT	CCATTGCGAG	CAGCCATCAG	ACCACGCATA	CCGGCAAGCT	8160
GTGAGAAGTT	TGAGATGTTA	CCACGGGCTC	CAGAGTCCAT	CATCATAACG	ATTGGGTCTT	8220
TAGGATCTTG	GTTAGCAATC	AAGCGTTTCT	CAAGTTTTTC	ACGGGCAGCA	CGCCATTGAG	8280
CTGTAACAGC	ATTGTAACGC	TCGTCGTCTG	TGATCATACC	ACGACGGAAT	TGTTTGGTGA	8340
TTTGTTCGAC	ACGTTTGTGT	GATTCTTCAA	TGATTTGAGC	CTTGTATCA	ACGACTGGGA	8400
TATCGGCAAT	ACCCACTGTC	AATCCTGCAA	GAGTTGAGTG	GTGGTAACCG	AGGTTCTTCA	8460
TGCGGTCAAG	TAGGGCAGAA	GTTTCTGTCT	TACGGAAACG	TTTGAAGATT	TCAGCGATGA	8520
TATTTCCAAG	GTTTTTCTTC	TTGAATGGAG	GGTTGAGCTC	AAGATTGCTG	ATAGCTTCCT	8580
TGATATCTCC	ACCAAGTGGC	AAGAAGTATT	TAGCTGGAAC	ACCTTCTGTC	AAGTTGGCAT	8640

811

TGTTTGGTTC	TTGCAAGTAT	GGTAGCCCT	CTGGCATGAT	ATCGTTGAAG	AGAATTTTAC	8700
CAACTGTTGT	AAGCAAGACC	TTATGTCTTT	GCTCTTCTGT	CCAAGGCTTG	TTGAGGCTGT	8760
CTGTTGCGAT	ACCAACACGT	GAGTGGAGGT	GAACATAACC	ATTGCGGTAA	GCCATAACCG	8820
CTTCGTCACG	GTCTTTGAAG	ACCATTCCCTT	CACCTTCGCG	ACCAGCTTCT	TCCATGGTCA	8880
AGTAGTAGTT	ACCCAAAACC	ATGTCCTGAG	ATGGAGTAAC	TACCGGTTTC	CCATCTTTCTG	8940
GGTTCAAGAT	GTGCTCAGCA	GCTAGCATGA	GGATACGAGC	TTCTGCTTGT	GCTTCTTCTG	9000
AAAGTGGTAC	GTGGATGGCC	ATTTGGTCCC	CGTCAAAGTC	AGCATTGTAG	GCTTCACAGA	9060
CAAGTGGGTG	CAAGCGAAGA	GCCTTACCAT	CAATCAAGAC	TGGCTCGAAG	GCTTGGATAC	9120
CCAAACGGTG	AAGGGTCGGT	GCGCGGTTCA	AAAGCACTGG	GTGTTCTTTA	ATCACTTCTT	9180
CAAGGATATC	CCAGATACGC	TCATCTCCGC	GTTCCACCAA	GCGTTTAGCT	GCTTTGACGT	9240
TTTGACGAT	ATCACGGGCA	ACGATTTCAC	GCATGACAAA	TGGTTTAAAG	AGTTC AATCG	9300
CCATTTACAG	CGGCACACCA	CATTGGTACA	TCTTAAGAGT	TGGACCAACG	GCGATAACTG	9360
AACGTCTGA	GAAGTCAACA	CGTTTACCGA	GCAAGTTTGT	ACGGAAGCGT	CCTTGTTTAC	9420
CTTTAAGCAT	GTGGCTCAAT	GATTTCAATG	GACGGCTACC	TGGTCCTGTG	ATTGGACGAC	9480
CACGACGACC	ATTGTCAATC	AAAGCGTCAA	CTGCTTCTTG	AAGCATACGC	TTCTCATTTT	9540
GAACGATGAT	ACCTGGTGCA	TTTAACTCAA	GCAAACGAGC	CAAACGGTTG	TTACGGTTGA	9600
TAACACGGCG	GTAAGGTCA	TTCAAGTCAG	ATGAGGCAAA	ACGGCCACCA	TCCAAGTGCA	9660
ACATTGGACG	AAGATCTGGT	GGGATAACCG	GAAGGATGTT	AAGAATCATC	CATTCAAGTT	9720
TGTTTCCAGA	CTTGTA AAG	GCATCCAAAA	CATCCAAACG	ACGGATGGCT	TTGACACGCT	9780
TTTGTCAGT	AGCTGTTTTC	AATTCCTCTT	TGAGTTCAGC	AATTTCTTTT	TCAAGATCTA	9840
CTTGCTTCAA	AAGGTCTTGG	ATGGCTTCCG	CACCCATCTT	GGCAACAAAT	GAACCATAAC	9900
CATATTCACG	CAAGCGCTCT	CGGTATTTCG	GCTCTGTCT	GATAGACTTG	TGCTCAAGTG	9960
GTGTATCCTT	AGGATCAATC	ACCACATAAG	CCGCAAAGTA	GATAACTTCC	TCGAGGGCAC	10020
GAGGGCTCAT	ATCAAGGGTC	AAGCCCATAC	GGCTTGGAAT	CCCCTTGAAG	TACCAGATGT	10080
GAGATACAGG	AGCTTTCAAT	TCGATATGTC	CCATACGCTC	ACGACGAAC	TTCGTACGCG	10140
TTACTTCAAC	CCCACAGCGG	TCACAAACAA	TTCTCTGTGA	ACGAATGCGT	TTGTACTTAC	10200
CACAAGCACA	TTCCAGTCT	TTTGTAGGAC	CAAAGATCAC	TTCATCAAAG	AGTCCTTCAC	10260
GTTCTGGTTT	CAAGGTACGA	TAATTGATTG	TTTCAGGTTT	TTTGACTTCT	CCATAAGACC	10320
ATGAACGGAC	TTTACTTGGA	GAAGCTAGGG	TGATTTGCAT	ACTTTTAAAA	CGATTTACAT	10380

812

CAACCACTAT TTCTTCCCTT TCTATTCTAA GTGAACCTGCT TATTCTTGTT CAGCAGCTTC	10440
TTCTGTGCT TCCGCTTTTG TTGCTTTC TC AGCTTCTTCA GCTTCAAAGG CTGCTTTAGC	10500
CTCTTGGGCT GCTTTTTCGC GGGCTTTTTC AAGGTCATCT ACGTGGATGA CATCTTCGTC	10560
CATTCCCTTCA TCCAAGTCGC GAAGTTCAC TTCTTGGTCA TCTTCGTCTA GGACACGCAT	10620
GTCAAGACCA AGAGATTGCA ATTCTTTGAC AAGAATCTCGG AAGGATTCTG GAACACCTGG	10680
TTTTGGAATT GGTTCGCTT TTGTAATAGC TTCATAGGCT TTCAAACGTC CGTTGATATC	10740
GTCCGACTTG TAAGTCAAGA TTTCTTGAAG GACATTTGAC GCACCGTAGG CTTCAAGAGC	10800
CCAAACCTCC ATCTCACCGA AACGTTGTCC ACCAACTGA GCCTTACCTC CGAGTGGTTG	10860
TTGGGTAACA GTTGAGTATG GTCCGACTGA ACGCGCTGC AATTATCAT CAACCATGTG	10920
GTGGAGTTG ATCATGTACA TGAATCCGAC AGAAACACGG TTATCAAACG GTTCACCACT	10980
ACGTCCATCG TAAAGGATCG TTTTGGCATC GCTATCCATA CCGCTTCTT TAACAGTTGA	11040
CCAAAGATCT TCAGAACTTG CTCCATCAA GACTGGTGTG GCGATGTGAA TACCAAGAGT	11100
ACGAGCTGCC ATACCAAGGT GAAGCTCCAT AACCTGACCG ATATTATAC GTGATGGTAC	11160
CCCAAGTGGG TTCAACATGA TGTCGACTGG AGTTCCTCT GGAAGGTAAG GCATGTCTTC	11220
TACAGGAACG ATACGAGAGA CAACCCCTTT GTTTCCTGTA CGTCCGGCCA TTTTATCTCC	11280
GACCTTAATC TTACGTTTTT GAGCGATGTA AACACGAACC AACATGTAA CACCTGATTG	11340
CAACTCATCT CCATTACAC GTGTAAAGAT CTTAACATCA CGAACGACAC CATCGGCACC	11400
GTGTGGTACA CGAAGAGAAG TATCACGCAC TTCACGAGAC TTGTCTCAA AGATAGCGTG	11460
CAAGAGACGT TCTTCAGCTG AAAGATCTT CTCACCTTA GGTGTACTT TACCTACAAG	11520
AATATCACCT TCTTTAACCT CAGCACCAAT ACGGATAAT CCCATTTCGT CAAGGTCTTT	11580
GAGGGCATCT TCACCAACGT TTGGAATTC GCGAGTGATT TCTTCAGGCC CAAGCTTTGT	11640
ATCGCGCGTT TCTGATTCTG ATTCTTCAAG GTGAACAGAT GTGTAGACAT CGTCTTCAC	11700
CAAGCGTTCG CTCATGATAA CGGCATCTC GAAGTTGTAA CCTTCCAAG TCATGTAGGC	11760
AACGATTGGG TTTTGTCAA GCGCCATTT TCCATTTTCC ATAGAAGGTC CGTCAGCGAT	11820
GAAATCGCCT TTTTCAACGA CATCACCAAC TTTTACGAGA GTGCGTTGGT TGTAAGCAGT	11880
ACCTGAGTTT GAACGACGGA ATTTTGGAT GTGGTAAACA TCCAATGAAC CATCTTCACG	11940
ACGAATCTCT ACCTTGTCAG CATCTGCGTA AGTAACCTTA CCATCATACT GAGCAATCAC	12000
AGCCGCACCA GAATCGTGGG CTGCTTGGTA TTCCATACCA GTACCAACGT AAGGTGCCTG	12060
AGGATTAATC AATGGCACAG CCTGACGTTG CATATTGGCT CCCATGAGGG CACGTTGGA	12120
GTCATCGTTT TCCAAGAAAG GAATACATGC TGTCGCAACG GCAACTACCT GTTTTGGTGA	12180

AACGTCCATG TAGTCAACAA TATTAGCTGG ATACTCTTGG TTGACCCCTT GGTGACGTCC	12240
CATGACAATC TTCTCAGCAA AGGTTCATC TTCATTTCAGA CGAGAGTTAG CCTGAGCTAC	12300
AGTATATTCA TCTTCTTCAT CAGCTGTCAA CCAAACAATT TCGTTCGTGA CAACACCTGT	12360
TTACCGGTCA ACCTTACGGT ATGGTGTGTT AACAAAACCA TATTTGTTCA AGTGTCCATA	12420
AGATGACAAG TTATTGATCA AACCGATGTT AGGTCCTTCA GGTGTCTCGA TTGGACACAT	12480
ACGACCATAG TGAGTGTAGT GCACGTCACG TACTTCATAT CCAGCACGGT CACGAGTCAA	12540
ACCACCAGGT CCTAAGGCTG ACAAACGGCG TTTGTGAGAC AACTCAGAAA GCGGGTTGTG	12600
TTGGTCCATG AACTGTGACA ACTGTGATGA ACCAAAGAAT TCTTTAACTG CAGCTGTTAC	12660
AGGACGGATA TTGATAATTT GTTGTGGTGT CAAGACTTCA TTGTCTGAA CAGACATACG	12720
TTACCGGACA TTACGTTCCA TACGAGAAAG TCCCAAACGT ACTTGGTTGG CAAGCAATTC	12780
ACCAACCGCA CGGATACGAC GATTTCCAAG GTGGTCGATA TCATCTACAC GGCCAAGTCC	12840
TTCAGCCAAG TTGAGGAAGT AGCTCATCTC AGCAAGGATA TCTGCAGGAG TCACCGTACG	12900
AACCTTGTC TCTGGGTTAG CATTACCAAT GATCGTTACG ACGCGATCTG GATCAGTTGG	12960
AGCAATAACC TTGAATTTTT GAAGAACAAC AGGCTCAGTC ACAACGGCTG CATCGTTTGG	13020
GATGTAGACA ATCTTGTTCA AGTCGCCATC CAAATGGCTT TCAATGCTTT CAATCACGCT	13080
ACGAGTCATA ATCGTACCAG CTTCTACCAA GATTTCTCCA GTTTCAGGGT CTACCAATGG	13140
CTCTGCAATG GTTTGGTTGA GCAAACGTGT TTAAACATTG AGTTTTTTAT TGATTTTGTA	13200
ACGACCAACT GCTGCCAAGT CATAACGACG TGGGTCAAAG AAGCGAGCTA CAAGCAAGCT	13260
ACGTGAGCTT TCAGCCGTCT TAGGCTCACC TGGACGAAGG CGTTCGTAAA TTTCTTTCAA	13320
GGCTTCGTCT GTACGAGAGT CCATTGGATT CTTGTGGATA TCTTTTTCAA CAGTGTGCG	13380
AACCAATTCTG CTGTCACCAA AGATATCAAA GATTTTCATCA TCACCTGAGA AACCAAGAGC	13440
ACGAACCAAG GTTGTAATG GAATCTTACG AGTACGGTCG ATACGAGTGT AGGTGATATC	13500
TTTTGAGTCG CTTTCAAGTT CCAACCAAGC TCCACGGTTA GGGATAACAG TTGAACCATA	13560
GCCCACCTTA CCATTTTTGT CTACTTTGTC GTTAAAGTAA ACACCTGGTG AGCGGACCAA	13620
CTGAGAAACG ATAATACGTT CACCACCATT GATGATGAAA GTACCCATTT CTGTCATGAT	13680
TGGGAAATCA CCAAAGAAAA CTTCTTGGGT CTTGATTTCTG CTTGTTTCTT TATTGATCAA	13740
ACGGAAGGTT AAAAAATTG GTGCTGAGTA GCTAGCATCG TGGATACGAG CTTCTTCTAG	13800
CGTATATTTT GGTTCTTGA TTTCATATCC AACAAATCC AACTCCATTG TGTCTGTGAA	13860
GTTTGAAATT GGCAATACAT CTTCAAACAC TTCCTTAAGA CCGTGGTCTA GGAAAGCTTT	13920

814

GAATGAGTCA GTTTGAATTT CAATCAAATT TGGTAAGTCA AGAACTTCTT TGATTCTTGA	13980
AAAAC TACGA CGGGTACGAT GTTTC CCGTA TTGAACGTCA TGTCTTGCCA AGATGATTCT	14040
CCTTTGTAAA TAAGTTCCAA GCCTTGTC AA TCAGGCTTTT CTAATCGTCA TATGGTTGTA	14100
AACCCCTTAT CACCGTGTCC TCTTGACGAA TTTTCAGAAT CTTTAAGCCT CTGTTACAAA	14160
TGCTCAAAAT CTTGAAAAAA AGCACAAAAA GAGCAGCTAA ATCTGACTTT TTCAGAAGAT	14220
TTAACTGCTG TGAGCCTTGT CTGGACAATA TTTTCAGACAA AACCTACGAC AAATGATTAC	14280
CCATATTATA CCCTATTTAG CTAGATTTTT CAAGGGGTTT CAGTAGGTTT TTGTTAAATT	14340
TTTTCCCAT A GAAACTTGG CATCACATTC GAATCACGCT ATGGTACAAA AACTGAAAA	14400
AACTATTGAC TGAAATCAT TTTCAAGGTA TAATAATAAA CGTTAAGGCG GTATAGCCAA	14460
GTGGTAAGGC ACGGCTCTGC AAAAGCTTGA TCGTCGGTTC AAATCCGTCT ACCGCCTTCT	14520
ATAACTTGAT TTATCAGGTT TCAAATGAAC AGAAAGCCCA ATTTGAAGGG CTTTTTTTAT	14580
TTTCCCTCGA ATAAATACGT ATAACTTTAA AAACCTTTTG AGCGAGTTTG TGGCAGAGTT	14640
CTTTCCATGG CATAATTCCC TTTTGAAATC AG	14672

(2) INFORMATION FOR SEQ ID NO: 112:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7902 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

AGGAGACTAT TCAAGCCCAA ATTgAGTAGC CCAGCAAAGA CTGTATAGAC TGTGATACGT	60
TTTTTCATAGC CATTTGGTAAA GAGAATTTGG GAACCAAGAA TGGTATCTAA GGCCAGGATA	120
ATCGTACGAA AAGCGAAGAG AGAGGTCAAG ATGCCGCCCTC CGATATATTT TTCACTACCG	180
TAAAGTAGGA TGGCATTTTGG TCCTAAAACC ATGAGTCCAA AACTCAGTGG AATGATAAAG	240
AAGTTAAAGA TTCGACTACC TCTATTAACC AGAGAAACAT AGGCTTCTTT GTCTCCTTTC	300
CCCAGATAGT AACTGAGACG AGGCACACTC ACTCCAATTG CACCTGTTAC AACCCCAGCT	360
ATAACGGTCA CAATTCGCTG AGCTATGGTA TAGTAACTAA CGTTGACATC AATCCCTGTT	420
TTAACGAGGA AGAGGCGATC TAAAAAAGTG AAGAGCATAT TGGCATTGGC AAAGACTAAC	480
ATGGCTGTCA GAGGGAGAAA GAGTGGTTTA AAATCACTTA GGTGAATTTT AACAAGTTTG	540
ATGTCTCTTT TAATCCAAAA ATAAC TAATC AGGTAGTTAA TCAGCGTCGA TAACTCATC	600
ACAAGTGTAT AGACAACAAT ATCGTGTTC TTTTAAACAA ATAAGAAAAT AGAGACCAGC	660

815

ATCAGGATAC	GGATGAAGGC	AGTTTGTGTA	AAGAGAAAAC	TGTAATTTTC	CAGAGCTTCA	720
TTGACCCATT	CGATTGAAAA	AATCTGGGCA	ATGAGTTGAA	TCCCCATAAC	AAGGTAGACC	780
TTTTTGCAG	TTGGATTATC	AGTAAAGAAG	AGAGGATAGG	CTAGGATATA	GACAGCAGTG	840
GTCAAAATCG	TACAAGCGAT	GCACAAATAA	AAAAGACTAG	AAAAGGTTCT	GTTAAGATCT	900
TTTTTGTAT	CCTTGACATT	ACTGATAGCC	CTTAAACCGT	AGTTATAGAC	ACCATAAGTT	960
GCAAAGGGCA	AGAAAAATGA	CAAAATAGTG	TCGACTGAGT	TGAAGTAACC	ATAGTCAGTT	1020
CGGTCCAAGA	CACGCGCGAC	ATAGGTTCCA	GTTAGGATGG	GAAAAATAAT	ATTCAAGACA	1080
CGAATTCCCA	TGTAAGATAG	AGCATTTAAT	TTTATACTTT	TCATTCAATT	TACCTCGTTT	1140
TTCATTATAT	CATAAAGTTA	GCTAATAAGA	AATGAAGGGC	AGTAAGTCAA	GTAATCACTT	1200
TGAAGTTTCA	AATCTTAAGT	TTTAAGTTT	CTTAAAGGAA	AGTATATTAT	TCTGAAGGAC	1260
TCTAAAATTT	CGCAGCCATT	TATTAGTAAT	TGCTACAGAA	TTCCTAGTCA	TTACTAGAAA	1320
TGGACTAGTT	TCTTTGAATA	ATAGAACTGC	ATAATTCTCC	TATTCTAGAA	GGGAGGACC	1380
AGTATTTCTT	TTATGATAGG	ACTAGATTGT	GGTATAATAG	AGAGAATAAG	TTTTTTTAGT	1440
AAGACAAAGG	AGAAAATAGA	TGATTTATGC	AGGAATTCTT	GCCGGTGGAA	CTGGCACACG	1500
CATGGGGATC	AGTAACTTGC	CAAAACAATT	TTTAGAGCTA	GGTGATCGAC	CTATTTTGAT	1560
TCATACAATT	GAAAAATTG	TCTTGAGGCC	AAGTATTGAA	AAAATGTAG	TTGGTGTCA	1620
TGGAGACTGG	GTTCCTCATG	CAGAAGATCT	TGTAGATAAA	TATCTTCCTC	TTATAAGGA	1680
ACGTATCATC	ATTACAAAGG	GTGGTGCTGA	CCGCAATACA	AGTATTAAGA	ACATCATTGA	1740
AGCCATTGAT	GCTTATCGTC	CGCTTACTCC	AGAGGATATC	GTTGTTACCC	ACGATTCTGT	1800
TCGTCCATTT	ATTACACTTC	GCATGATTCA	GGACAATATC	CAACTTGCCC	AAAATCATGA	1860
CGCAGTGGAC	ACAGTGGTAG	AAGCGTTGA	TACTATCGTT	GAAAGTACCA	ATGGTCAATT	1920
TATTACAGAT	ATTCCAAATC	GTGCTCACCT	TTATCAAGGA	CAAACACCTC	AAACATTCCG	1980
TTGCAAGGAC	TTCATGGACC	TTTATGGATC	TCTTTCTGAT	GAAGAGAAGG	AAATCTTGAC	2040
AGATGCATGT	AAAATCTTTG	TGATCAAAGG	AAAAGATGTG	GCTTTGGCCA	AAGGTGAATA	2100
CTCAAATCTG	AAGATTACAA	CCGTAACAGA	TTTGAAGATT	GCAAAAAGTA	TGATTGAGAA	2160
AGACTAGTAA	AATGATTAAT	CAAAATTATC	AACTAACTAA	GCCTAAGTTT	ATCAATGTCA	2220
AATATCAGGA	AGAGGCTATT	GACCAAGAGA	ATCATATCCT	TATCCGTCCC	AACTACATGG	2280
CTGTCTGTCA	TGCGGATCAG	CGTTACTATC	AGGGAAAACG	TGATCCCAAG	ATTTTGAATA	2340
AAAAGCTTCC	AATGGCAATG	ATTCACGAGT	CATGTGGAAC	CGTCATTTCT	GACCCGACCG	2400

816

GAACCTACGA GGTGGTCAA AAAGTTGTCA TGATTCCCAA TCAGTCTCCT ATGCAGAGTG	2460
ATGAAGAATT CTATGAAAAC TACATGACAG GGACCCATTT CTTGTCTAGT GGATTTGATG	2520
GCTTTATGAG AGAGTTTGT TCTCTCCCTA AAGATCGTGT GGTGGCTTAT GATGCTATTG	2580
AAGATACGGT TGCAGCCATT ACAGAGTTTG TCAGTGTGGG CATGCACGCT ATGAATCGTC	2640
TATTGACTCT TGCTCATAGC AAGCGGGAGC GGATCGCCGT TATTGGAGAT GGAAGTTTAG	2700
CTTTTGTGGT TGCCAATATT ATCAACTATA CTTTGCCAGA AGCAGAGATT GTGGTTATTG	2760
GTCGTCATTG GGAAAAGTTG GAACTCTTCT CATTTGCCAA AGAATGCTAT ATTACGGATA	2820
ATATTCCTGA AGATTTGGCC TTTGACCATG CTTTGAATG TTGTGGTGGT GATGGTACTG	2880
GACCAGCTAT TAATGACTTG ATTCGCTACA TTCGTCCTCA GGAACGATT CTCATGATGG	2940
GAGTTAGCGA ATATAAAGTC AATCTCAATA CTCGCGATGC CTTAGAAAAG GGCTTGATTT	3000
TGGTTGGGTC ATCTCGTTCT GGTGCGATTG ATTTTGAAAA TGCTATCCAA ATGATGGAAG	3060
TCAAGAAATT TGCCAATCGT CTTAAAAATA TCCTTTATCT AGAAGAACCT GTAAGAGAAA	3120
TTAAAGATAT TCATCGTGTC TTTGCAACCG ATTTAAACAC AGCCTTTAAA ACAGTGTTTA	3180
AGTGGGAAGT ATAAGTACTG GAGGTTAATT GTGGAGAAAA TCATTAAAGA AAAAATTCT	3240
TCCTTACTTA GTCAAGAAGA GGAAGTCCTC AGTGTGAAC AACTGGGTGG AATGACCAAT	3300
CAAACTATT TGGCCAAAAC AACAAATAAG CAATACATTG TTAAATTCTT TGGTAAAGGG	3360
ACAGAAAAGC TTATCAATCG ACAAGATGAA AAGTACAATC TTGAACTACT AAAGGATTTA	3420
GGCTTAGATG TAAAAAATTA TCTTTTGTGAT ATTGAAGCTG GTATCAAAGT AAATGAGTAT	3480
ATCGAATCTG CGATTACGCT TGATTCAACG TCAATCAAGA CCAAGTTCGA CAAAATTACT	3540
CCAATATTAC AAATATTCA TACGTCTGCT AAGGAATTAA GAGGAGAATT TGCTCCTTTT	3600
GAAGAAATCA AAAAATACGA ATCCTTGATT GAAGAACAAA TTCCTTATGC CAACTATGAA	3660
TCTGTTAGAA ATGCAGTCTT CTCCTTAGAG AAAAGACTGG CTGACTTAGG TGTGACAGA	3720
AAATCTTGTC ATATCGATTT GGTGCCTGAA AACTTTATCG AATCACCTCA AGGACGACTT	3780
TATTTGATTG ACTGGGAATA TTCATCAATG AATGATCCAA TGTGGGATTT GGCTGCCCTC	3840
TTTTTAGAGT CTGAATTCAC TTCCAAGAG GAAGAACTT TCTTATCTCA CTATGAGAGT	3900
GACCAAACAC CGGTTTCTCA TGAAAAGATT GCTATTTATA AAATTTTACA AGATACTATT	3960
TGGAGTCTAT GGAAGTCTA TAAGGAAGAG CAAGGTGAAG ATTTGGTGA CTATGGTGTG	4020
AATCGTTACC AAAGAGCTAT TAAAGGTTTG GCTTCTTATG GAGGTTTACA TGAAAAGTAA	4080
AAACGGAGTT CCTTTGGCC TTCTCTCAGG TATTTTCTGG GGCTTGGGTC TAACGGTTAG	4140
TGCTTATATC TTTTCGATTT TTACAGATTT GTCACCCTTT GTGGTGGCTG CAACTCATGA	4200

TTTTTTGAGC ATCTTTATCT TACTAGCTTT TCTCTTGGTA AAAGAAGGGA AAGTTCGCCCT	4260
CTCAATTTTC TTAAATATTC GCAATGTCAG TGTATCATC GGAGCCTTGC TAGCAGGCCC	4320
TATCGGTATG CAGGCCAATC TTTATGCAGT TAAGTATATC GGAAGTTCTT TAGCTTCATC	4380
TGTATCGGCT ATTTACCCTG CGATTTCAGT TCTATTGGCT TTCTTCTTTT TGAAGCACAA	4440
GATTTGCGAA AATACTGTAT TTGGGATTGT CTTGATTATT GGAGGGATTA TTGCTCAGAC	4500
CTATAAGGTT GAACAGGTTA ATTCTTTCTA CATTGGGATT CTTTGTGCTT TGGTTTGTGC	4560
TATTGCATGG GGAAGTGAGA GTGTTCTTAG CTCTTTTGCC ATGGAAAGTG AATTGAGTGA	4620
AATCGAAGCC CTCTTAATCC GTCAAGTAAC TTCGTTCTTG TCCTATCTTG TGATTGTGCT	4680
CTTCTCTCAT CAGTCATTTA CTGCAGTAGC CAATGGACAA TTGCTAGGTC TCATGATTGT	4740
TTTTGCAGCC TTGATATGA TTTCTACTT GGCTTATTAT ATCGCTATCA ATCGCTTGCA	4800
ACCAGCCAAG GCTACAGGCT TGAACGTGAG CTATGTAGTA TGGACGGTCT TGTTTGCAGT	4860
TGTTTTCTTG GGTGCACCGC TAGATATGCT GACCATTATG ACGTCACTTG TCGTCATTGC	4920
TGGAGTTTAT ATTATTATTA AAGAATAAAG GAGATTCGTG TGAAAGCCAT TATCTTAGCA	4980
GCGGGATTGG GAACTCGCTT GCGTCCTATG ACTGAAAATA CCCCTAAAGC CTTGGTTCAG	5040
GTTAATCAAA AACCTTTGAT TGAGTACCAA ATTGAGTTTC TCAAAGAAAA AGGAATCAAT	5100
GACATCATCA TCATTGTTGG TTATCTTAAA GAACAATTCG ATTACTTGAA AGAGAAATAC	5160
GGTGTTCGTC TCGTTTTCAA TGATAAATAC GCTGACTACA ATAACTTTTA CTCTCTCTAT	5220
CTTGTA AAAAG AAGAATTGGC CAACAGCTAT GTTATTGATG CTGACAATTA TCTCTTAAA	5280
AATATGTTCC GCAATGATTT GACACGTTTC ACTTATTTTA GTGTTTATCG TGAAGATTGT	5340
ACCAACGAAT GGTTCCTGGT TTATGGAGAT GACTACAAGG TTCAAGACAT TATTGTTGAT	5400
AGCAAGGCAG GTCGCATCCT TAGTGGTGTA TCCTTCTGGG ATGCTCCAAC TGCAGAAAAG	5460
ATTGTCAGCT TTATCGACAA GGCTTATGTA AGTGGTGAAT TTGTTGATCT CTATTGGGAC	5520
AATATGGTTA AGGATAATAT CAAAGAGCTA GATGTCTATG TTGAAGAATT AGAAGGCAAT	5580
AGCATTTATG AGATCGATAG TGTCCAAGAC TATCGTAAAT TAGAAGAAAT TCTTAAAAAC	5640
GAAAATTAAA GATTCCAACA TCTGACAAAA TAGTCGGATG TTTTTTGATT TTTTACGAAC	5700
TTTTACGAAT AGATAGATGA GTAGAAAAAG AAATGGAGTT ATTTATGAAA ATCACAAACT	5760
ATGAAATCTA TAAGTTAAAA AAATCAGGTT TGACCAATCA ACAGATTTTG AAAGTGCTAG	5820
AATACGGTGA AAATGTTGAT CAGGAGCTTT TGTGGGTGA TATTGCAGAT ATCTCAGGTT	5880
GCCGTAATCC AGCCGTTTTT ATGGAACGTT ATTTTCAGAT AGACGATGCG CATTTGTGCA	5940

818

AAGAGTTTCA AAAATTTCCA TCTTTCTCTA TTTTAGATGA CTGTTATCCT TGGGATTGTA	6000
GTGAAATATA TGATGCGCCT GTACTTTTAT TTTACAAGGG AAATCTTGAC CTCCTGAAAT	6060
TCCCGAAGGT AGCGGTCGTG GGCAGTCGTG CTTGTAGCAA ACAGGGAGCT AAGTCAGTTG	6120
AAAAAGTCAT TCAAGGCTTG GAAAAATGAAC TGGTTATTGT CAGTGGTCTG GCCAAGGGCA	6180
TTGACACAGC AGCTCATATG GCAGCTCTTC AGAATGGCGG AAAAACCATT GCAGTGATTG	6240
GAACAGGACT GGATGTGTTT TATCCTAAAG CCAATAAACG CTTGCAAGAC TACATCGGCA	6300
ATGACCATCT GGTCTAAGT GAATATGGAC CTGGTGAACA ACCTCTGAAA TTTCATTTTC	6360
CTGCCCGTAA TCGCATCATT GCTGGACTTT GTCGTGGTGT GATTGTAGCA GAGGCTAAGA	6420
TGCGTTCAGG TAGTCTCATT ACGTGTGAGC GAGCAATGGA AGAAGGACGC GATGCTTTTG	6480
CTATTCTCGG TAGCATTTTA GATGGACTAT CAGACGGTTG CCATCATTTG ATTCAAGAAG	6540
GAGCAAAATT GGTCAACAGT GGGCAAGATG TTCTTGCGGA ATTTGAATTT TAAAAATGAC	6600
CTAAGCTAGA ATTCTAAGAA AAAATCAATT TTAAGAGAAA ATGAACCCAA CATTTCCATA	6660
ATAAAACGCA TATTAGCAAG TTTTAAACAC TTGATAATAT GCGTTTTTTC TAAGTGGATT	6720
AGTAGAGTAG AGGATTTTTC TCAATATAA CTCTTCGAAA ATCTCTTCAA ACTACGTCAG	6780
CTTCCATCTG CAACCTCAAA ACAGTATTTT GAGCGaCTtC GTCAGTCTTA TCTACACCT	6840
CAAAGCAGTG CTTTGAGCAA CCTGTGGCTA GCTTCCTAGT TTGCGCTTTG ATTTTCATTG	6900
AGTATAAGGG AAAGTATAGT GAATTGAAAT AAGATGTGAA CAACTCTATC AGGAAAGTCA	6960
AATTAATTTA TAGAAATATT TTAGCAGCCA AGGTGTACTG TTATAGATTC AATTACACTA	7020
TAATTTAGTG TAATTGAGAA AGGAGAAATG ATTGTGATTG ATGTTGGCTA GGTATGTTC	7080
AATGATTCCCT ACCGTCTCAA ATCTTGTCAG TAAGGAAAAA TAAATTCTTC AAAAGTAGAG	7140
ATTACAAGGC TTGTTTAAGA AAGAATTCAA AGACCTTGAC AAATAAAAAT AAAATGGTTA	7200
TTATAAAAAA TGGTCTGAAA TAGATGATGA TACTTTTCGA AAATCTCTTC AAATACGTCA	7260
GCTCAGCTTT GCCTTGCTGT GTTTTGAGCA AGCTACGGTT AGCTTCCGAG TTTGATTTTC	7320
ATTACTAGA AATGAACTG ATGAGAGATA TCAGTAGACA TTTGAGTCAG GATATTATGG	7380
AAAATGATAA AAAGAGCTCG TGAGATTGGC ATATCAGACT ACTAAAGTAT TGAGTTGTTC	7440
AGGATTTTAG CGACTAGTTA GCTGGGAAAG GAAGATATTT GTGACAAATA ATAACTGTA	7500
TTCGTTGATA GAATTTAGAA ATAAAAATATA TGAAGAATTA GAACTTTCCA GAAGTGATTT	7560
AGCGATTTTA CTATGTGCCA TGCTTATCGC CTCTATCGGA TTAAATATGG ATTCGACTCC	7620
CGTGATTATT GGAGCCATGT TAATCTCTCC TTTGATGACA CCTATTCTGG GAGTGGGGCT	7680
CTCTCTAGCT ATATTGATT TTAAATTGTT AAGAAAATCT TTAAAAATAT TAGCTATTCA	7740

819

AATTCTTGCC AGTCTAATAG CTTCACACT TTATTTTTAT CTTTCTCCCA TTTCGTATGC	7800
TAGTTCGGAG ATTGTTGCTA GAACCTCTCC GACTATTTGG GATGTTCTCA TTGCTTTTGT	7860
AGGAGGGGATA GCAGGTATCA TTGGTGCTAG GAAAAAAGAG AC	7902

(2) INFORMATION FOR SEQ ID NO: 113:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 18627 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

GAAGTTGAAA TGGCCAGCTG ATGAGCAATA TCGGTCATAG AAATCTTCTC AATCAACTTT	60
TGCGCAATTT TTTGGTTGAT AATACGAGGA ATTTGGTGAT TTTTCTTGAC GATAGAAGTT	120
TCAGCGACCA TCATTTTGA ACAGTGATAG CACTTGAAAC GACGCTTTCT AAGTAGAATT	180
CTAGTAGGCA TACCAGTTGT CTCAGGTAA GGAATCTTAG ACGGTTTTTG AAAGTCATAT	240
TTCTTCAATT GGTTCGCA CTCAGGGCAA GATGGGGCGT CGTAGTCCAG TTTGGCGATG	300
ATTCCTTGT GTGTATCTT ATTGATGATG TCTAAATCT GGATATTAGG GTCTTTAATG	360
TCTAGTAATT TTGTGATAA ATGTAATTGT TCCATATGAA TCTTTCTAAT GAGTTGTTTG	420
GTCGCTTTTC ATTATAGGTC ATATGGGACT TTTTCTTAC AATAAAATAG GCTCCATAAT	480
ATCTATAAGG GATTACCCA CTACAAATAT TATAGAGCCA AAAATCCTTT GTTACTATAA	540
CAAGGGATTT TTCTTTTGT TCTGCTCCTT TTTTGATATA ATAGTTCTAT GTTAAATCA	600
GAAAAACAAT CACGTTATCA AATGTTAAAT GAAGAATTGT CCTTCCTATT GGAAGGCGAA	660
ACCAATGTTT TGGCTAATCT TTCCAACGCC AGTGCTCTCA TAAATCACG TTTTCTAAT	720
ACCGTATTTG CAGGCTTTTA TTTGTTGAT GGAAGGAAT TGGTTTATAG CCCCTTCCAA	780
GGAGGTGTTT CCGCATCCG TATTGCACTA GGCAAGGGTG TTTGTGGTGA GGCAGCTCAC	840
TTTCAGGAAA CTGTTATTGT TGGAGATGTG ACGACCTATC TCAACTATAT TTCTTGTGAT	900
AGTCTAGCTA AAAGTGAAAT TGTGGTGCCG ATGATGAAGA ATGGTCAGTT ACTTGGAGTT	960
CTGGATCTGG ATTCTTCAGA GATTGAGGAT TACGATGCTA TGGATCGAGA TTATTGGAA	1020
CAATTGTGCG CTATTTTGCT TGAAAGACA GCATGGGACT TTACGATGTT TGAGGAAAAA	1080
TCTTAATGTA TCAAGCACTT TATCGAAAAT ATAGAAGTCA AAACCTCTCC CAGTTAGTTG	1140
GTCAAGAAGT TGTGGCTAAG ACTCTTAAAC AAGCGGTGGA GCAAGAGAAA ATAAGTCACG	1200

820

CTTATCTTTT TTCTGGTCCT CGTGAACGG GAAAAACCAG TGTGCTAAA ATCTTTGCCA	1260
AGGCTATGAA CTGTCCCAAT CAAGTGGGTG GCGAACCTTG CAATAACTGC TATATTGTCT	1320
AAGCAGTGAC GGACGGTAGT TTAGAAGATG TCATTGAAAT GGATGCAGCT TCTAATAATG	1380
GGGTAGATGA AATTCGCGAA ATTCTGTATA AATCTACCTA TCGCCTTAGC CTTGCTCGTT	1440
ATAAGGTTTA TATCATAGAT GAGGTTTACA TGCTGTCTAC AGGGGCTTTT AATGCCCTCC	1500
TAAAGACGCT GGAAGAACCA ACACAGAATG TAGTCTTTAT TTTGGCCACT ACTGAATTGC	1560
ACAAGATTCC TGCTACTATT CTATCCCGTG TGCAACGTTT TGAGTTTAAA TCAATTAAGA	1620
CACAGGATAT TAAGGAACAT ATTCACATA TCTTAGAAAA AGAAAATATC AGTTCTGAAC	1680
CAGAGGCTGT GGAAATCATT GCCAGACGGG CGGAAGGTGG AATGCGGGAC GCCTTGCTCTA	1740
TTTGGATCA AGCCCTGAGT TTGACACAGG GAAATGAGCT GACGACTGCT ATCTCTGAAG	1800
AAATTACTGG CACCATTAGC CTATCAGCCT TGGATGATTA TGTGGCGGCC TTGTCTCAAC	1860
AGGATGTTCC CAAAGCTTTG TCTTGCTTGA ATCTTCTTTT TGACAATGGT AAGAGCATGA	1920
CTCGTTTGTG GACCGATCTT TTGCACTATT TAAGAGACTT GTTAATTGTT CAAACAGGGG	1980
GAGCAAATAC TCATCATAGT TCAGTCTTTG TAGAAAAATT GGCACCTTCCT CAAAAAATC	2040
TGTTTGAAAT GATTCGCTTA GCAACAGTGA GTTTAGCAGA TATTAAGTCT AGTTTGCAAC	2100
CCAAGATTTA TGCTGAAATG ATGACCGTCC GTTTGGCGGA AATCAAGTCC GAACCAGCTC	2160
TATCAGGAGC GGTGAAAAAT GAAATTGCTA CGCTGAGACA GGAAGTTGCC CGTCTCAAAC	2220
AAGAGCTTTC TAATGTAGGT GCGGTTCCCTA AACAAGTTGC ACCAGCTCCT AGTCGACCAG	2280
CTACGGGCAA AACAGTCTAT CGTGTGATC GCAATAAAGT GCAATCTATC TTACAAGAGG	2340
CCGTCGAAAA TCCTGATTTA GCACGTCAA ATTTAATTCG TTTGCAGAAT GCCTGGGGAG	2400
AGGTAATTGA AAGTCTAGGT GGGCCGACA AGGCTCTGCT AGTTGGTTCT CAACCGGTTG	2460
CTGCCAATGA ACACCATGCT ATTCTTGCTT TTGAGTCTAA CTTCAATGCT GGTCAAACCTA	2520
TGAAACGAGA CAATCTCAAT ACCATGTTTG GTAATATCCT CAGTCAGGCG GCAGGTTTTT	2580
CACCTGAGAT TTTAGCTATT TCCATGGAGG AATGGAAAGA AGTTGCGGCA GCCTTTTCAG	2640
CCAAAGCCAA ATCTTCTCAA ACTGAAAAAG AAGTAGAAGA AAGCCTGATT CCAGAAGGAT	2700
TTGAATTTTT GGCTGATAAA GTGAAGGTAG AGGAAGACTA AAGAAAGATT TCATGATACA	2760
ATAAGTTTAT GAATAACAA CAATTTATTA TTATGGCGCT GTTTACAGCT GCTGAGACCT	2820
ATTTTTTCAA TGAAGCCTGG ATGACTGGCC GCTATATTAT GGCAGCCTTT TGGGCAATTT	2880
TACTCTTTAG AAATTTCCGA GTCAGTTATG TGATGGGCAA AATCGTTGAT GTCATCGATC	2940
AGCATTTTAA TAGGAAAGAC TAGCCCTCAG CTTCAGACA AAATCAAAGC CTTTTAGGCT	3000

TTTTTTTGT	ATACTAGAAA	AGTATATTTA	TAGAATTTTT	GCTCTATTTT	TGGGGAAATC	3060
AGACGTTTTT	CTAGTAAGTA	CTGTAAAAGT	TTTGAAAAAG	AAAGGAAC	TAATGTCAGT	3120
ATTAGAGATC	AAAGATCTTC	ACGTTGAGAT	TGAAGGAAAA	GAAATTTTAA	AAGGGGTAA	3180
CCTGACCCTG	AAAACAGGAG	AAATTGCCGC	TATCATGGGA	CCAAATGGTA	CAGGTAAATC	3240
GACTCTTTCT	GCCGCTATCA	TGGGAAATCC	AAACTATGAA	GTAACATAAG	GTGAAGTTTT	3300
GT'TTGATGGC	GTAAACATCC	TTGAGTTGGA	AGTGGATGAG	CGTGCGCGTA	TGGGACTTTT	3360
CCTTGCTATG	CAATACCCAT	CAGAAATCCC	TGGAATTACC	AATGCTGAGT	TTCTTCGTGC	3420
CGCTATGAAT	GCGGGTAAAG	AAGATGATGA	GAAGATTTCA	GTTCGTGAGT	TTATTACTAA	3480
GCTAGATGAA	AAAATGGAAT	TGCTCAACAT	GAAAGAAGAA	ATGGCAGAGC	GTTACCTCAA	3540
CGAAGGCTTC	TCTGGTGGTG	AGAAAAACG	CAATGAAATT	CTTCAACTTT	TGATGTTGGA	3600
GCCAACATTT	GCTCTTTTGG	ACGAGATTGA	CTCAGGTCTT	GATATTGACG	CTCTTAAAGT	3660
TGTGTCTAAA	GGTGTCAATG	CCATGCGTGG	TGAAGGTTTT	GGTGTATGA	TCATCACTCA	3720
CTACCAACGT	CTTTTGAACT	ATATCACACC	TGATGTGGTA	CACGTGATGA	TGGAAGGTCC	3780
TGTTGTCCTT	TCTGGTGGTC	CAGAATTGGC	TGCGCGTTTG	GAACGTGAAG	GATACGCAAA	3840
ATTAGCTGAA	GAACTTGGCT	ACGACTACAA	GGAAGAATTG	TAATCCCTC	GTATCTTTTA	3900
GGAGAAGTAA	ATGACTAGAG	AAAATATTAA	ACTTTTTTCA	GAAATGCACG	CTGAACCAAG	3960
CTGGTTGGCT	GATCTCCGTC	AAAAAGCTTT	TGACAAGATT	GAGACTTTGG	AATTACCAGT	4020
TATTGAGTGT	GTCAAATTC	ACCGTTGGAA	TCTGGGTGAT	GGAACGATTA	CAGAAAATGA	4080
GCCATCAGCA	AATGTTCCAG	ATTTCACAGC	TTTAGATCAT	CACCTTGAAGT	TGGTGCAAGT	4140
AGGAACTCAA	ACTGTTTTCG	AACAACTCC	AGTTGAGTTA	GCTGAACAGG	GTGTTGTCTT	4200
CACAGACTTT	CACCTAGCTT	TAGAAGAAAT	TCCAGAGCTG	ATCGAAGAAT	TCTTCATGTC	4260
ATCTGTTAAG	TATGATGATG	ACAAGTTGGC	GGCTTACCAC	ACAGCTTACT	TTAACAGTGG	4320
TGCTGTACTC	TATATTCCAG	ATAACGTAGA	AATCACAGAG	CCAATTGAAG	GAATTTTCTA	4380
CCAAGATAGC	GATAGCAATG	TGCCGTTTAA	CAAGCATATT	ATGATTATCG	TTGGTAAAAA	4440
TTCTAAGATT	AGTTATCTGG	AGCGTTTAGA	GTCACGCGGT	GAAGGAAGTG	ACAAAGCAAC	4500
TGCCAATATC	ACAGTGGAAG	TGATTGCACG	TTCTGGTGCG	CAAGTCAAGT	TTGCTGCTAT	4560
CGACCGTCTA	GGTGAAAACG	TCACTGCCTA	CATTAGCCGT	CGTGGTAAAT	TAGGCAACGA	4620
TGCAAGTATT	GACTGGGCTA	TCGGTGTCAT	GAACGAAGGA	AATGTCGTTG	CTGATTTTGA	4680
TAGTGACTTG	ATTGGTAATG	GTAGCCATGC	TGACCTCAAG	GTTGTAGCTC	TTTCAAGTGG	4740

822

TCGTCAGGTA	CAAGGGATTG	ATACTCGTGT	AACTAACTAT	GGCTGCAACT	CAATCGGAAA	4800
CATTCTACAA	CATGGGGTTA	TCCTTGAAAA	AGCAACTTTG	ACTTTCAATG	GTATCGGCCA	4860
CATCATCAAG	GGTGCTAAGG	GAGCAGATGC	GCAACAAGAG	AGCCGTGTTC	TCATGCTTTC	4920
AGACCAAGCG	CGTTCAGATG	CTAACCCAAT	TCTTTTGATT	GATGAAAATG	ACGTAAGTGC	4980
AGGCCATGCA	GCCTCTATTG	GTCAGGTAGA	TCCAGAAGAT	ATGTACTACC	TCATGAGTCG	5040
TGGCTTGAT	AAGGCAACTG	CAGAGCGTTT	GGTTGTTCGT	GGTTTCCTTG	GATCTGTTAT	5100
CGTGGAGATT	CCAGTCAAGG	AAGTTCGTGA	TGAAATGATT	GCAACTATCG	AAGAGAAATT	5160
GTCAAAACGC	TAAGGGGCAG	CCTATGTTAG	ATGTAGAAGC	GATTCGCAAG	GATTTTCCAA	5220
TTTGTAGATCA	GATTGTCAAT	GATGAACCTC	TGGTCTATCT	GGACAATGCT	GCGACGACAC	5280
AAAAACCACT	AGTAGTTCGT	AAAGCTATTA	ACAGCTACTA	TGAGCAGGAC	AATGCCAATG	5340
TTCACCGTGG	TGTCCATACC	TTAGCGGAAC	GAGCGACAGC	TTCTTATGAA	GCTGCTCGTG	5400
AAACCATTCG	TAAGTTTATT	AATGCAGGCT	CTACAAAGGA	AGTTCTCTTT	ACCAGAGGAA	5460
CGACAACCAG	CCTTAACTGG	GTGGCACGCT	TTGCTGAGGA	AATTCTCACT	GAGGGAGACC	5520
AGGTCTTGAT	TTCAGTAATG	GAACACCATT	CTAATATCAT	TCCATGGCAG	GAAGCTTGTC	5580
GAAAGACTGG	AGCAGAGCTT	GTCTATGTCT	ATCTTAAAGA	CGGTGCCTTG	GATATGGAGG	5640
ATTTGCGAGC	TAAATTGACT	GATAAGGTTA	AATTTGTTTC	CCTAGCTCAT	GCCTCCAATG	5700
TTCTTGGTGT	GGTCAATCCG	ATCAAGGAAA	TCACTCAATT	AGCCCACCAA	GTTGGGGCAA	5760
TTATGGTAGT	GGATGGTGCT	CAATCTACAC	CTCATATGAA	GATTGATGTC	CAGGACTTGG	5820
ATCTGGACTT	TTTCGCCTTT	TCGGGTCACA	AGATGGCTGG	TCCGACTGGT	ATCGGTGTCC	5880
TTTACGGCAA	AGAAAAGTAT	CTTGAGCAAA	TGTCTCCAGT	AGAATTGCGC	GGCGAGATGA	5940
TTGATTTTGT	CTACGAGCAA	TTTGCTAGTT	GGAAGGAATT	GCCTTGGAAG	TTTGAGGCTG	6000
GAAACGCCAAA	TATGGCAGGA	GCTATTGGAC	TTGCGACTGC	AGTTGATTAT	CTGGAAAAGA	6060
TTGGTATGGA	TGCCGTTGAA	GCTCATGAAC	AGGAATTGAT	TGCGTACGTC	TATCCAAAAC	6120
TGCAGGCAAT	TGAGGGATTG	ACCATTTACG	GTTCTCAGGA	TTTGGCTCAA	CGTTCGGGTG	6180
TTATTGCCTT	TAACCTAGGT	GATCTCCATC	CTCACGATCT	TGCGACGGCT	CTGGATTATG	6240
AAGGAGTGGC	TGTTCTGTCT	GGTCACCATT	GTGCGCAACC	CTTGCTTCAG	TATTTGGAAG	6300
TCCCAGCAAC	AGCTCGTGCA	AGTTTTTATA	TCTACAATAC	CAAGGCAGAT	TGCGACAAAC	6360
TAGTCGATGC	CCTACAAAAG	ACAAAGGAGT	TTTTCAATGG	CACCTTCTAA	ACTAGATAGC	6420
CTTTATATGG	CAGTGGTAGC	AGACCATTCT	AAAAATCCAC	ATCACCAAGG	GAAGTTAGAA	6480
GATGCTGAGC	AAATCAGTCT	CAACAATCCG	ACTTGTGGGG	ATGTCATCAA	CCTCTCTGTC	6540

823

AAGTTTGATG CAGAGGACCG TTTGGAAGAT ATTGCTTTTC TAAATTCAGG ATGCACGATT	6600
TCAACTGCCTT CTGCTAGTAT GATGACAGAT GCCGTTT TAG GAAAAACCAA ACAAGAAATT	6660
TTAGAACTGG CGACTATTTT TTCTGAAATG GTTCAAGGGC AAAAAGATGA GCGTCAAGAC	6720
CAACTTGGAG ACGCGGCATT CTTGTCAGGT GTTGCCAAAT TCCCTCAAAG AATCAAGTGT	6780
GCAACCCTAG CTTGGAATGC CCTTAAGAAA ACAATTGAAA ATCAAGAAAA ACAGTAAGAC	6840
AAGTTTCTTT TGTCTTATGA ATTATTAGAA ATGAAGAAAG AAAGGATACT ATGGCTGAAG	6900
AAAGAGTAGA ACCAAAACCA ATTGACCTTG GTGAATATAA ATTTGGTTTC CATGACGATG	6960
TAGAGCCTGT CTTATCGACA GGAAAAGGAC TCAACGAAGG TGTTATTCGT GAATTATCTG	7020
CTGCTAAGGG TGAGCCTGAG TGGATGTTGG AGTTCCGTTT GAAGTCTTAT GAAACCTTCA	7080
AAAAATGCC CATGCAAACT TGGGGAGCAG ACTTGTCAGA GATTGACTTT GATGACTTAA	7140
TCTACTACCA AAAACCATCT GACAAACCAG CCCGTTCTTG GGATGATGTA CCTGAAAAGA	7200
TTAAAGAAAC CTTTGAACGT ATCGGGATTTC CAGAAGCTGA ACGTGCTTAT TTAGCAGGGG	7260
CTTCGCCCCA GTACGAGTCA GAAGTGGTTT ACCACAACAT GAAGGAAGAG TTCCAAAAAT	7320
TAGGTATTAT CTTTACAGAT ACAGATTCCG CACTCAAGGA ATACCCAGAC TTATTTAAAC	7380
AATACTTTGC GAAGTTGGTA CCGCCGACAG ATAACAAGTT GGCAGCCCTC AACTCAGCAG	7440
TATGGTCGGG TGGAACTTT ATCTACGTGC CAAAAGGTGT CAAGGTAGAT ATTCCACTTC	7500
AAACTTATTT CCGTATCAAT AACGAAAATA TAGGTGAGTT CGAACGTACC TTGATTATCG	7560
TTGATGAGGG AGCAAGCGTC TACTACGTAG AAGGATGTAC AGCACCAACA TATTCAAGCA	7620
ATAGCTTACA CGCTGCCATT GTAGAAATTT TTGCTTTGGA CGGAGCTTAT ATGCGTTATA	7680
CAACTATCCA AAACCTGGTCT GATAACGTCT ATAACCTGGT AACAAAGCGT GCTAAGGCTC	7740
AAAAGGATGC CACTGTTGAG TGGATTGATG GAACTTGGG TGCCAAAACG ACTATGAAAT	7800
ATCCATCTGT TTACCTTGAT GGAGAAGGAG CGCGTGGTAC CATGCTCTCT ATCGCCTTTG	7860
CTAATGCAGG GCAACACCAA GACACGGGTG CTAAGATGAT TCACAATGCT CCACATACCA	7920
GCTCGTCTAT TGTGTCTAAA TCCATCGCTA AAGGTGGAGG AAAGGTTGAC TACCGTGGAC	7980
AAGTCACCTT TAACAAGAAC TCTAAGAAAT CTGTTTCCCA CATTGAATGT GATACCATTA	8040
TCATGGATGA CTTGTCAGCA TCAGATACTA TTCCATTTAA TGAAATTCAC AACTCGCAAG	8100
TGGCTTTGGA ACACGAAGCC AAAGTATCTA AGATTTCAGA AGAGCAATTG TATTATCTCA	8160
TGAGCCGTGG ATTGTCAGAA TCTGAGGCAA CTGAAATGAT TGTCATGGGA TTTGTAGAAC	8220
CCTTTACAAA AGAACTTCCA ATGGAATACG CAGTTGAGCT GAACCGCTTG ATTAGCTATG	8280

824

AAATGGAGGG ATCAGTTGGA TAAATTTGA TTTTATACTC TCGAAAATC TCTTCAAACC	8340
ACGTCAGCAT CGCCTTACCG TATGTATGGT TwCTGAtTCG TCAGTTTCAT CTACAACCTC	8400
AAAACAGTGT TTTGAGCAAC tGCGGCTAGC TTCCTAGTTT GTTCTTTGAT TTTGAGTATT	8460
AGATTTACTC AAAATCAAGG ATTTTGAAGA TGAACCTGTA TCAAAAAATC GCGGTTTAAA	8520
ATCGCGATTT TTTATAATTT CTCGTTAACA AAGCGGACAA ACTGATTCCA CCAAACTTT	8580
AAGAAGAAGG CTTTTTCAAT TTTCTTGTCT GCTACCATTT CGAAACTAGG GCGCTCTGTG	8640
GTGATGTAAC CTTGACCAAT CAAGTCCTTG TCTTCATAAG TCAAATGGCC AACCACGT	8700
CCAGCTTCAA GTGGTGCTGG GATTGCTTTG GAATCAGGTG TGAATTGAAC AGATTGGGAA	8760
GATTGATTCC CAACACGTC GATTAGATAG ATATCCTCTG GAGCCACTGC AGTTACTGTA	8820
TCTTCTTTTC CATCTGTAC AGGGGCTTTG CTATCTTGAT AGGCATCGCC TTGTTGAACG	8880
ATTTTGCGAA GTGTAAATGT AGAAGAAATA TAATCCATTA GGGAAGATGT AGCTGTAAAT	8940
CGAGCGTAAG GATTATTGTC TTGATGATCT GCATTTAAAA CAACTGTGAT GACTCTCATG	9000
CCTTTTTCGA CAGTAGTACC AACAAAAGAC TCTCCAGCCT TATCTGTTGT TCCTGTTTT	9060
AGCCCATCAA AACCACCAG GTAAGCAGGC ATACCTTCTA ACATGTAGTT GGTGGAAGTG	9120
ATTGTCATCC CAGCAAAAGT AGAAGAAGGT TTTTGGTGA TTTCTAAGAC TTGTGGGTAT	9180
TTTTTGATGA GGTGCGAGC AACGATAGCG ACATCATAAG CACTAAGCTT ATTTCTCTCA	9240
TCTTTTTTAG AACCTGGGTA AATGTTATCC CCTAGAGTTT CATGTTAAG ACCTGTCGTA	9300
TTGACAACAG TGGCATCCTG AATCCCCAT TCCAAGAGTT TTGCCCAGCAT CATATCGACG	9360
AAATCTTTTT CTGAGCCAGC AATTTTCTCA GCTAGGGCAA TAGCGGCGCT GTTGGCACTA	9420
GATACCAGAG TTGCTTCAAG CAACTCTTCG ACAGTATAAT TACGGGCCTC CATAGGAATA	9480
TTACTGGCTT CAGAATTGTT CGTCAATTGA TAAGGATAAT CAGAAATATC TACAGGAGTG	9540
GAGAGGGTAA TACTTCCGTT TTCCAAAGCT TCATAGACCA GATAAACAGT AATCAATTTT	9600
GTTATGGAAG CAATTCGAC AGGTTGCGTT GCATCCTTCT CATAGAGAAT TTTACCAGTA	9660
TTTGCTCAA CAGCAATCGC ATGTTTAGCG GCAATGGTAA AATCTTGAGC AACAGCAGTA	9720
GAAGCACCCC CTAAAAGAGA GACAGTTAAC AAAGTTAAAA ATATTTTTTT CATAGTAGTC	9780
TTATCTATC ATAAAGAAAA AAAATATTCT TGCTTTAATA ATTCATCTGT TAAGCTTTTT	9840
GAAAATATGG TAAAATAAAG TAAGGGAGGT AACTCATGTT TCGTAGAAAT AAATTATTTT	9900
TTTGGACCAC AGAAATTTTA CTCTTAACCA TCATCTTTTA CCTATGGAGA CAGATGGGGT	9960
CTTTGATTAA CCCTTTTGTT AGCGTGCTTA ATACAATTAT GATTCATTT TTATTAGGGG	10020
GCTTTTTTTA TTATTTGACA AACCTATTG TTACTTCTT AAATAAAGTC TGTAAACTCA	10080

825

ATCGTTTGCT TGGTATTTTA ATTACCTTGT GTACTTTGGT CTGGGGAATG GTCATAGGTG	10140
TTGTCTATCT CTTACCTATT TTGATTAATC AGTTATCTAG TTTGATTATA TCTAGTCAAA	10200
CTATTTATAG TCGAGTACAA GACTTAATCA TAGACTTATC TAATTATCCT GCGCTCCAGA	10260
ATTTGGATGT AGAAGCTACA ATTCAGCAGT TAAACTTATC CTATGTTGAT ATTCTTCAAA	10320
ATATCCTAAA TAGCGTATCA AATAGTGTGG GGAGCGTCTT GTCAGCTCTT ATCAGTACTG	10380
TTTTGATTTT GATTATGACT CCAGTTTTT TGGTTTATTT CTTATTAGAT GGACATAAAT	10440
TCTTGCCCAT GCTTGAAAGA ACGATTCTAA AGAGGGATCG CTTGCATATT GCAGGCTTAT	10500
TAAAGAATTT AAATGCGACG ATTGCTCGCT ATATTAGTGG AGTTTCGATT GACGCAATCA	10560
TTATAGGTTG TTTGGCTTAT ATTGGCTATA GTATTATTGG TTTAAAATAT GCTTTAGTTT	10620
TTGCCATTTT TTCTGGTGTA GCCAATTAA TTCCTTATGT GGGGCCAAGT ATTGGTTTGA	10680
TTCTATGAT CATCGCAAAT ATATTCAGT ATCCCCATAG ACTGCTGATT GCAGTGATTT	10740
ATATGCTTGT TGTTCAAGC GTAGATGGCA ATATCTTATA TCCTCGAATC GTAGGAAGTG	10800
TTATGAAGGT TCATCCAATC ACGATTTTAG TTTTACTTTT GTTGTCAAGC AATATCTATG	10860
GTGTAGTTGG AATGATTGTC GCAGTGCCAA CCTATTCTAT CTTGAAAGAA ATTTCTAAGT	10920
TCTTATCCCA TTTGTATGAA AATCATAAAA TAATGAAAGA ACGAGAAAGA GAATTAGCTA	10980
AGTAAAAGTC AGGAGAACCC TGATTTTCT TTAGTGGAAG TGGCCTTTAG ATTAGAAGAC	11040
TGAAAAATAAG TTAAAGTCTT AACTAATTT TCACAGCTAA GAATAGTAGA AGTTAATCTG	11100
ATAAAAATCG AAAAAACCAG TGGAATTCTG TGTCAGGGTA AGTTCCACTG GTTTTCATAG	11160
TCTATTAAAG TTCGAATGAA ACCTATTTAT AGTAGATTGA AACTAGAATA GTACACCTCT	11220
AATTCTAAAA CATTGTTAGA AATCGATTTG ACTGTCCTGA TCTATTCGTT CTATTTCTAT	11280
TTTATTTTAC TATATTTTGG TGCAATAAGT GAAAAGTAGT CCGAATAATA TAAGGATTGA	11340
TTTTATAGTT TTTAACTCA AATGAATTGA AATAAGAGA GTACGAAAAT TCTCATCTGA	11400
AAGTATTTTA GAATAATTCT CTTCTGAAT TTCTTCAAAA CAGATAGCTT CATCTTAGGT	11460
ATGTGATTTT TTTTGCATT TTTGAGTTAG ATAAGGTATA ATGATTTTAT TGTCTTTTGG	11520
GGTCGTTACG GATTCGACAG GCATTATGAG GCATATTTTG CGACTCGTGT GCGACGTAA	11580
ACGCTCAGTT AAATATAACT GCAAAAAATA ACACCTCTTA CGCTCTAGCT GCCTAAAAAC	11640
CAGCAGGCGT GACCCGATTT GGATTGCTCG TGTTCAATGA CAGGTCTTAT TATTAGCGAG	11700
ATACGATTAA GCCTTGTCTA GCGGTTTGAT AAGAGATTGA TAGACTCGCA GTTCTAGAC	11760
TTGAGTTATG TGTCGAGGGG CTGTTAAAAA AATACATAAC CTATGGTTGT AGACAAATAT	11820

826

GTTGGCAGGT GTTGGACGT GGGTTCGACT CCCACCGGCT CCATTATTCC TTTGCATTCT	11880
TTTGCATTCC TTGGTAAAAC GTTGTAAAT CAACGTTTTT TATTTTTATC TTTGGTATTC	11940
CTTTGCATTC TTTTGCTAAA AAGGGAGTCA CAAACAGACC CTATTTTAAA AAAGGATAGA	12000
AAAAAGGATA CAACATTGT CGCATCCTAA AAATAATCTT TTTTCGACGG AAGACATGGG	12060
ATTCGAAGCC ACGCACGCTA TTACACGCCT ACCGCGTTTC CAACACGGCC TCTTAAGCCT	12120
CTTGAGTAAT CTCCAATAC TTAATCAAAT AGTCTACCAT AAAGGCTCTT ATCTTGCAAT	12180
AAAAATTCTA GAAATAAGAA AAATGATAGA TTTTGAAAGA AAATGATAAA AAATGCTTGA	12240
CTTCGAAAGA AAGTATGATA GAATGAATAG TGTAACGAT AACAGGAGGT GATTCAAGTGT	12300
TAAAAACAGA ACGTAAACAA CTAATTTTAG AGGAGTTAAA TCAACATCAT GTAGTTTCTC	12360
TAGAAAAATT AGTTAGTTTG CTAGAAACGT CAGAATCAAC GGTTCGAAGA GACTTGGATG	12420
AGTTGGAAGC GGAAAAAAG CTTCGTCGTG TGCATGGTGG AGCAGAACTC CCCTACTCCT	12480
TACAGGAAGA AGAAACCAT CAAGAAAAAT CTGTCAAAAA CCTTCAAGAA AAGAAATTGC	12540
TGGCTCAGAA AGCAGCCTCT CTCATTAAAG AAAAAGATGT CATCTTTATC GATGCTGGAA	12600
CAACAACGTC TTTTGTGATT CATGAATTGG TCAATAAGAA GTTACAGTT GTGACCAACT	12660
CCATTCAACA TGCCGCTCAG TTGGTTGAAA AGCAGAWTCC AACTGTCATG GTTGGAGGAA	12720
ACGTCAAGAC GGCGACAGAT GCTAGTATCG GGGGCGTTGC TCTTAACCAG ATTAACCAAT	12780
TGCACTTTGA CCGTGCCTTT ATCGGAATAA ATGGTGTTGA CGATGGCTAT TATACGACTC	12840
CTGATATGGA GGAGGGAGCT GTGAAAAGAG CTATTTTGA GAATGCCAAG CAGACCTACG	12900
TCTTGGTGA TTCGTCAAAA ATTGGACAAA CTTGCTTTGC CAAGGTAGCC CCACTCAAAC	12960
GCGCTATCGT TATCACTAGT CAAGGGCATG AGCTCTTGCA GGTATTAAAG GAGAAAACGG	13020
AGGTAATAGA AGTATGATTT ATACAGTCAC ACTCAATCCA TCCATTGACT ATATCGTTGC	13080
TTTGGACCAA GTCAAAGTTG GTAGTGTCAA TCGTATGGAC AGTGATGATA AGTTTGCTGG	13140
TGGGAAAGGA ATCAATGTCA GCCGTGTCTT GAAACGTTTG AATATACCAA ATACAGCGAC	13200
GGGATTTATC GGTGGCTTTA CTGGTAAATT TATCACAGAT ACTTTAGCAG AGGAAGAAAT	13260
CGAGACACGT TTTGTCCAGG TGGCAGAAGA TACTCGTATC AATGTTAAAA TCAAAGCAGA	13320
CCAAGAAACA GAAATCAACG GAACGGGTCC AACTGTTGAA TCGGTTACGC TAGAAGAATT	13380
GAAAGCTATT TTATCTAGTC TGACAGCAGA AGATACAGTT GTCTTTGCAG GTTCAAGTGC	13440
TAAAAATCTA GGCAATGTTA TCTATAAGGA TTTGATTTCC TTGACGCGCC AGACTGGTGC	13500
GCAAGTGGTC TGTGACTTTG AAGGACAGAC CTTAATTGAT AGTTTGGACT ACCAGCCTCT	13560
TCTTGTAATA CCAAACAATC ATGAACTTGG AGCGATTTTT GGGGTAAAC TCGAAAGTTT	13620

AGATGAAATT GAGAAATACG CTCGTGAGTT ACTGGCTAAG GGTGCTCAAA ATGTTATTAT	13680
CTCTATGGCT GGTGATGGTG CCCTTCTTGT CACATCTGAG GGAGCTTACT TCGCTAAACC	13740
AATCAAAGGA ACAGTCAAAA ATTCAGTTGG AGCTGGTGAT TCTATGGTTG CTGGATTAC	13800
AGGTGAATTT GTCAAATCAA AAGACGTAGT AGAAGCCTTC AAATGGGGAG TGGCTTGCGG	13860
AACGGCAACT ACCTTCTCAG ATGACTTGGC AACGGCGGAA TTTATTAAAG AAACATATGG	13920
AAAAGTTGAG GTAGAAAAAC GATGAAATTT CAAGACCTAT TGAGAAAAGA TGTCATGTTG	13980
CTAGATTTGC AGGCAACTGA AAAACAGCT GTCATCGACG AGATGATTAA AAATTGACA	14040
GACCACGGTT ATGTAACAGA TTTTGAAACA TTAAAGAAG GAATTTTGGC GCGTGAAGCT	14100
TTGACTTCTA CTGGTTTGGG TGATGGAATC GCAATGCCTC ACAGCAAAAA CGCTGCTGTC	14160
AAAGAAGCGA CAGTTCTATT TGCTAAGTCA AATAAGGGTG TTGACTACGA GAGCTTGGAT	14220
GGACAAGCAA CTGACCTCTT CTTCATGATT GCAGCTCCAG AAGGTGCCAA TGATACTCAC	14280
TTGGCAGCCT TGGCAGAATT GTCTCAATAC TTGATGAAAG ACGGTTTTCG AGACAAACTT	14340
CGTCAAGCAA CATCTGCAGA CCAAGTTATC GAACTTTTTG ACCAAGCTTC AGAAAAAAT	14400
GAGGAACTTG TTCAAGCACC TGCTAATGAC TCTGGTGACT TTATCGTAGC TGTTACAGCT	14460
TGTACAACAG GTATTGCCCA CACTTACATG GCCCAAGAAG CCCTTCAAAA AGTAGCTGCT	14520
GAAATGGGGG TTGGTATCAA GGTGAAACC AACGGTGCTA GCGGTGTTGG AAATCAACTA	14580
ACTGCAGAAG ATATCCGTAA GGCTAAAGCT ATTATCATTG CAGCAGACAA GGCCGTGAA	14640
ATGGATCGAT TTGATGAAA ACCATTGATC AATCGTCCAG TTGCTGACGG TATCCGTAAG	14700
ACAGAAGAGC TAATTAACCT GGCTCTTTCA GGAGATACTG AAGTCTACCG TGCCGCTAAT	14760
GGTGCCAAAG CTGCAACAGC CTCTAACGAA AAACAAAGCC TTGGTGGTGC CTTGTACAAA	14820
CACTTGATGA GTGGTGATC TCAAATGTTA CCATTGTTA TCGGTGGTGG TATCATGATT	14880
GCCCTTGCCCT TCTTGATTGA CGGTGCTTTG GGTGTTCCAA ATGAAAACCT TGGCAATCTT	14940
GGTTCTTACC ATGAGTTAGC TTCTATGTTT ATGAAAATTG GTGGAGCTGC CTTTGGTTTG	15000
ATGCTTCCAG TCTTTGCGGG TTATGTTGCC TACTCTATTG CTGAAAAACC GGGTTTGGTA	15060
GCAGGTTTCG TGGCTGGTGC TATTGCCAAA GAAGGTTTTG CCTTTGGTAA AATTCCTTAT	15120
GCCGCAGGTG GTGAAGCAAC TTCAACTCTT GCAGGTGTCT CATCTGGTTT CCTAGGTGCC	15180
CTTGTGGTG GATTATCGC AGGTGCCTTG GTTCTTGCCA TCAAGAAATA CGTTAAAGTT	15240
CCTCGTTCAC TCGAAGGTGC TAAATCAATC CTTCTATTGC CACTTCTTGG AACAATCTTG	15300
ACAGGATTTG TTATGCTAGC TGTGAATATC CCAATGGCTG CAATCAACAC TGCTATGAAT	15360

828

GACTTCCTAG	GCGGTCTGG	AGGAGGTCA	GCTGTCCTTC	TTGGTATCGT	CCTTGGTGGA	15420
ATGATGGCTG	TTGACATGGG	TGGACCAGTT	AATAAAGCAG	CTTATGTCTT	TGGTACAGGT	15480
ACGCTTGCAG	CAACTGTTTC	TTCAGGTGGT	TCTGTAGCCA	TGGCAGCAGT	TATGGCTGGA	15540
GGAATGGTGC	CACCACTTGC	AATCTTTGTC	GCAACTCTTC	TTTTCAAAGA	TAAATTTACT	15600
AAGGAAGAAC	GTAACCTCTG	TTTGACAAAC	ATCATCATGG	GCTTGTTCATT	TATCACTGAG	15660
GGAGCGATTC	CATTTGGTGC	CGCTGACCCA	GCTCGTGCGA	TTCCAAGCTT	CATCCTTGGT	15720
TCAGCAGTAG	CAGGTGGACT	CGTTGGTCTT	ACTGGTATCA	AACTCATGGC	GCCACACGGA	15780
GGAATCTTCG	TTATCGCCCT	TACTTCAAAT	GCTCTCCTTT	ACCTCGTTTC	TGTCTTGGTA	15840
GGAGCAATCG	TAAGTGGTGT	GGTTTATGGT	TACCTACGCA	AACCACAAGC	ATAAAAAATA	15900
GAAAAATGAA	AAGATTGGAC	CGTTTGGTGC	AGTCTTTTTT	TCTTCCCGAA	ATGCCTGTGA	15960
AATATGGTAT	AATAGAAGAA	TGGCAAACAA	GAATACAAGT	ACAACAAGAC	GGAGACCGTC	16020
TAAAGCAGAA	CTGGAAAGAA	AAGAAGCGAT	TCAACGAATG	TTGATTTCGT	TAGGAATTGC	16080
GATTTTATTG	ATTTTCGCAG	CCTTCAAATT	AGGGGCTGCA	GGTATAACCC	TTTATAATTT	16140
AATTGCGTTG	CTAGTGGGTA	GCCTAGCTTA	TCTGGCGATA	TTGGGCCTAT	TAATCTATCT	16200
CTTCTTTTTC	AAGTGGATAC	GAAAACAGGA	AGGACTCTTA	TCTGGCTTTT	TCACCATATT	16260
TGCTGGCTTA	CTCTTGATTT	TTGAGGCCTA	CTTGGTTTGG	AAATATGGTT	TGGACAAGTC	16320
CGTTCTAAAA	GGGACCATGG	CTCAGGTGTG	GACAGATCTG	ACTGGTTTTC	GAACGACTAG	16380
CTTTGCTGGA	GGGGGCTTGA	TCGGGGTCGC	TCTTTATATT	CCAACAGCCT	TTCTCTTTTC	16440
AAATATCGGA	ACTTACTTTA	TTGGTTCTAT	CTTGATTTTA	GTGGGTTCCT	TCCTAGTCAG	16500
CCCTTGGTCT	GTTTACGATA	TTGCTGAATT	TTTCAGTAGA	GGCTTTGCCA	AATGGTGGGA	16560
AGGGCACGAG	CGTCGAAAAG	AGGAACGCTT	TGTCAAACAA	GAAGAAAAAG	CTCGCCAAAA	16620
GGCTGAGAAA	GAGGCTAGAT	TAGAACAAGA	AGAGACTGAA	AAAGCCTTAC	TCGATTTGCC	16680
TCCTGTTGAT	ATGGAAACGG	GTGAAATTCT	GACAGAGGAA	GCTGTTCAAA	ATCTTCCACC	16740
TATTCCAGAA	GAAAAGTGGG	TGGAACCAGA	AATCATCCTG	CCTCAAGCTG	AACTTAAATT	16800
CCCTGAACAG	GAAGATGACT	CAGATGACGA	AGATGTTTCT	GTCGATTTTT	CAGCCAAAGA	16860
AGCCCTTGAA	TACAAACTTC	CAAGCTTACA	ACTCTTTGCA	CCAGATAAAC	CAAAAGATCA	16920
GTCTAAAGAG	AAGAAAATTG	TCAGAGAAAA	TATCAAAATC	TTAGAAGCAA	CCTTTGCTAG	16980
CTTTGGTATT	AAGGTAACAG	TTGAACGGGC	CGAAATTGGG	CCATCAGTGA	CCAAGTATGA	17040
AGTCAAGCCG	GCTGTTGGTG	TAAGGGTCAA	CCGCATTTC	AATCTATCAG	ATGACCTCGC	17100
TCTAGCCTTG	GCTGCCAAAG	ATGTCCGGAT	TGAAGCACCA	ATCCCTGGGA	AATCCCTAAT	17160

829

CGGAATTGAA GTGCCAACT CCGATATTGC CACTGTATCT TTCCGAGAAC TATGGGAACA	17220
ATCGCAAACG AAAGCAGAAA ATTTCTTGGA AATTCCTTTA GGGAAGGCTG TTAATGGAAC	17280
CGCAAGAGCT TTTGACCTTT CTAAAAATGCC CCACTTGCTA GTTGCAGGTT CAACGGGTTC	17340
AGGGAAGTCA GTAGCAGTTA ACGGCATTAT TGCTAGCATT CTCATGAAGG CGAGACCAGA	17400
TCAAGTTAAA TTTATGATGG TCGATCCCAA GATGGTTGAG TTATCTGTTT ACAATGATAT	17460
TCCCCACCTC TTGATTCCAG TCGTGACCAA TCCACGCAA GCCAGCAAGG CTCTGCAAAA	17520
GGTTGTGGAT GAAATGGAAA ACCGTTATGA ACTCTTTGCC AAGGTGGGAG TTCGGAATAT	17580
TGCAGGTTTT AATGCCAAGG TAGAAGAGTT CAATTCCCAG TCTGAGTACA AGCAAATTCC	17640
GCTACCATTG ATGTGCTGTA TTGTGGATGA GTTGGCTGAC CTCATGATGG TGGCCAGCAA	17700
GGAAGTGGAA GATGCTATCA TCCGTCCTGG GCAGAAGGCG CGTGCTGCAG GTATCCACAT	17760
GATTCTTGCA ACTCAGCGTC CATCTGTTGA TGTCATCTCT GGTTTGATTA AGGCCAATGT	17820
TCCATCTCGT GTAGCATTTG CGGTTTCATC AGGAACAGAC TCCCGTACGA TTTTGGATGA	17880
AAATGGAGCA GAAAACTTC TTGGTCGAGG AGACATGCTC TTAAACCGA TTGATGAAAA	17940
TCATCCAGTT CGTCTCCAAG GCTCCTTTAT CTCGGATGAC GATGTTGAGC GCATTGTGAA	18000
CTTCATCAAG ACTCAGGCAG ATGCAGACTA CGATGAGAGT TTTGATCCAG GTGAGGTTTC	18060
TGAAATGAA GGAGAATTTT CGGATGGAGA TGCTGGTGGT GATCCGCTTT TGAAGAAGC	18120
TAAGTCTTTG GTTATCGAAA CACAGAAAGC CAGTGCCTCT ATGATTCAGC GTCGTTTATC	18180
AGTTGGATTT AACCGTGCAG CCCGTCTCAT GGAAGAACTG GAGATAGCAG GTGTCATCGG	18240
TCCAGCTGAA GGTACCAAAC CTCGAAAAGT GTTACAACAA TAAAAAATA GCTTCTTTCC	18300
AAGTTTGAG GGAAGCTATT TTAGTGGCTA TTGATTGCTT TTATTTTCTG AAGTTGGCGC	18360
ATTGGACTGT TTTTCGTTTT CAGTAGCAGG TTTACTTGAA GCAGGAGTAG AAGAGTCTG	18420
AGTTGCTGTT TTCTGATCTT CTTTTTCTC TTCCTTGACG CTAGATTTTG GTGTTTCCTC	18480
TGCTGTGTT TTTTCTTGAC TAGTGTTAGT CTCTTTAGTT GGACTGGTGT TTTCTTAGG	18540
GGATTCCTTT TGGATTCTT TGACAATGGT TGTCGTCTGG CTTGTCGTAG GTTCTTTTTT	18600
AATATTTTGT TTATTATCCA AGGCGTT	18627

(2) INFORMATION FOR SEQ ID NO: 114:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 2560 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

TAAAATACGT TACCTTGCTT CTGCACGTT AGCAGGTAAG TCATTGAAAT TTAAAGATCA	60
AGATATTACA ATTGAAGAAA CGACTGAAAC AGCTTTTGAA GGAGTTGATA TTGCTCTCTT	120
TTCAGCAGGT AGTTCTACAT CAGCTAAGTA TGCACCATAC GCAGTAAAAG CTGGCGTGGT	180
AGTAGTAGAT AATACATCTT ATTTCCGTCA AAATCCAGAT GTTCCTTTGG TTGTTCCAGA	240
GGTCAATGCT CATGCACCTG ATGCTCACAA CGGAATCATT GCCTGCCCTA ATTGTTCAAC	300
AATTCAAATG ATGGTGGCTC TTGAGCCGGT TCGCCAAAAA TGGGGCTTGG ACCGTATCAT	360
TGTTTCAACT TATCAAGCCG TTTCAGGTGC TGGTATGGGA GCAATTCTTG AGACACAACG	420
TGAACTTCGT GAAGTCTTGA ATGATGGTGT GAAACCACGT GATTTCATG CGGAAATCTT	480
GCCTTCAGGT GGTGACAAGA AACATTATCC TATCGCCTTT AACGCTCTTC CACAAATTGA	540
TGTTTTCACT GATAATGATT ACACGTACGA AGAGATGAAG ATGACCAAGG AACTAAGAA	600
AATTATGGAA GATGATAGCA TTGCAGTATC TGCAACATGT GTCCGTATTC CAGTCTTGTC	660
AGCTCACTCT GAGTCTGTTT ATATCGAAAC AAAAGAAGTG GCTCCAATCG AAGAAGTAAA	720
AGCAGCTATC GCAGCCTTCC CAGGTGCTGT TCTTGAAGAT GATGTAGCTC ATCAAATCTA	780
TCCTCAAGCT ATCAATGCAG TTGGTTCGCG TGATACCTTT GTTGGTCGTA TCCGTAAAGA	840
CTTGGATGCA GAAAAAGGAA TTCACATGTG GGTGTGTTCA GATAACCTTC TCAAAGGTGC	900
TGCTTGGAAC TCAGTTCAGA TTGCTGAAAC TCTTCATGAA CGTGGATTGG TTCGTCCAAC	960
AGCCGAATTG AAATTTGAAT TAAAATAGTC ATATCGTTTA GGAGTTCAGA TGAATCCTT	1020
CTTTGAAATA GAGAGGTGTT TTCGTGTCTT ATCAAGATTT AAAAAAATGT AAAATCATTA	1080
CAGCCTTTAT TACCCCTTC CATGAGGATG GTTCCATPAA CTTTGATGCT ATTCCAGCCT	1140
TGATTGAGCA TTTATTGGCC CATCATACGG ATGGAATTCT TCTCGCAGGA ACGACTGCTG	1200
AGAGTCCAAC TTTGACCCAC GATGAGGAGT TGGAGTTGTT TGCGGCTGTA CAAAAGGTTG	1260
TCAATGGACG CGTTCCTTTG ATTGCGGGTG TAGGTACTAA TGATACGCGT GACTCTATTG	1320
AGTTTGTCAA AGAAGTAGCG GAATTGGTG GTTTCGCAGC TGGGCTTGCT ATTGTTTCCTT	1380
ACTACAACAA ACCTTCTCAA GAAGGGATGT ATCAGCACTT TAAGACTATT GCAGATGCTT	1440
CTGACCTACC AATTATTATC TATAACATTC CAGGGCGTGT AGTTGTCGAA TTGACTCCAG	1500
AAACCATGCT TCGCTTGGCT GACCATCCAA ATATTATCGG TGTCAAAGAA TGTACTAGCT	1560
TGGCTAATAT GGCTTACTTG ATTGAGCACA AGCCTGAAGA GTTCTTGATT TATACAGGTG	1620
AGGATGGAGA TGCTTTCCAT GCCATGAACC TTGGGGCGGA TGGGGTTATT TCTGTTGCCT	1680

831

CTCATACAAA TGGGGATGAA ATGCACGAGA TGTTTACTGC GATTGCAGAA AGCGATATGA	1740
AGAAAGCCGC AGCAATTCAG CGTAAATTCA TTCCTAAGGT TAATGCTCTC TTCTCTTATC	1800
CAAGTCCTGC TCCAGTTAAG GCAATTCTTA ACTATATGGG ATTTGAAGCT GGACCCACTC	1860
GTCTACCTCT TGTTCAGCA CCAGAAGAAG ATGCCAAACG CATTATCAAG GTTGTCGTAG	1920
ATGGCGACTA CGAAGCAACT AAGGCAACTG TAACAGGGGT CTTAAGACCA GATTACTAAT	1980
AAAGACAATA AAATCCGGCT CTTTGTCAAC TGTAGTGGGT TGAAGTCAGC TAAGCTCGAG	2040
AAAGACAAA TTTTGTCTTT TCTTTTTTGA TATTCAGAGC GATAAAAATC CGTTTTTTGA	2100
AGTTTTCAAA GTTCCGAAAA CCAAAGGCAT TGCCTTGAT AAGTTTGATG AGATTATTGG	2160
TCGCTTCCAA TTTGGCGTTT GAATAGGGTA GTTGAAGGGT GTTGACGATT TTCTTTTTGT	2220
CCTTTAGAAA GGTTTTAAAG ACAGTCTGAA AAATAGGATG AACCTGCTTC AGATTGTCTT	2280
CAATGAGTCC GAAAAATTTT TCCGGTTCCT TATTCTGAAA GTGAAACAGC AAGAGTTGAT	2340
AGAGCTGATA GTGATGTTT AAGTTTGTG AATAGCTCAA AAGCTTGTTC AAAATCTCTT	2400
TATTGGTTAA GTGCATACGA AAAGTAGGAC GATAAAATCG CTTATCACTC AGTTTACGGC	2460
TATCCTGTTG AATGAGTTTC CAGTAGCGCT TGATAGCCTT GTATTCCGGA TTTTCGATGA	2520
AAC TGATTGGAC ACGCACACGA CTCATAGCAC	2560

(2) INFORMATION FOR SEQ ID NO: 115:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 11303 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

TATTGGATTT CCCTTGCAAT CAGTTTATGG GACAAGCACC CGGCAGCGCA GAGGAAATCA	60
ACGCCTTCTG TAGCCTACAT TTTCAAACCA CCTTCCCACG TTTTGCCAAG ATTAAGGTCA	120
ACGGTAAGGA AGCAGACCCT CTCTATGTCT GGTACAAGA CCAGAAATCC GGCCCACTAG	180
GAAAACGAGT CGAATGGAAT TTCGCTAAGT TTCTCATCGG TCGAGATGGG CAAGTCTTTG	240
AACGCTTTTC TTCAAAAACA GACCCAAAAC AAATTGAAGA GCGGATACAA ACTCTACTAT	300
AATTCACAAT CTCATATGA TTAGGTTTCC TTAAACCTGA TGAATAGTGA GATTTTTTGA	360
TGGGCTTTGA CTAAATAGA AAAACACCCC ATGATATGAA ACATGAAGTG TTGTAAAGTC	420
TATGTTGTAG GTGCTTATTT CACAATTTC AATGTGACCAG TGATAACGAA TACCATACAG	480

832

AATCTTCATA TACACTAAAC AAATGACTTT CTAATTATTT CAATTAGTTT TGGCTAGTAA	540
ATATCATTTT CAACAAACGC CCTCTCAATT CCTTATCCTG ATGATGCAAG ATATTCATTA	600
AGTCATGAGA GTTTTTTCGCA TTGATGAATT GATTAAACAA TCTATCTTTT AATTCATATG	660
GAAGAGAAGC TGTCTTTAGT AGTCTAAAAA CTTCTGCATT TAAAGATGTC CTTTTATTAT	720
CTTTCCATTC AAATTTAGCT GTATCATTTCT TATTTGGCAA TTCAATTATA GACACATTCG	780
TTCTTTTAAA ATGAATTCTA TGTCTTCTAT TGCTTGGAAC GATACTAGAA TCTCCTTGTA	840
ATGCTAACTC TACCATTCCC ATTTCCCAAT CGATTGATAA TCTTGTTTTA TATCTTTGAC	900
CATTTTGATC TTCAAGCATT TCAAAAGAAT GTTGTTTTCC TGGGAATACA TACCAATCTA	960
CAACTTCAGG TAAATCAACA CCCATACCTA TCTCAGAACC AACCAAGGGA ATGATTGCAC	1020
CACTTTTTGC AAACACAGGC GTAGTCGAGA TGTCCTTATA AACACTTAAC TTCACACCAC	1080
CTGTGTATTT TTTCTCTGAA AAGAAGTCAT ACCATTACCC TTCAGGGAAC CATACATCTA	1140
CTTTTGCAGA TTGGAATGTC AAATCCATCT TTTCTACAAT GGGAGCCACC ATCAGTTCTG	1200
TTCCAAAAAA GTATTGGTTT GGAACATTAT AGCTCTCATC ATTCTCTGGA TAGAAATAAT	1260
AGATTGGACT GATTAATGGG GCACCTTCCT CATGTGTCTG TACATTCATG GTATATAGAT	1320
AGGGAATCAT CTGATGTCTC AAACGAAGGT ATTTCTTCAT AATCTTAGAT GTTGTTCCTG	1380
AAAAAAACCA AGGTTCTTTA CTATTAAAAG GACTTCTAGA ACTATGTAAT CGAGTAATCG	1440
GACTAAAAAC ACCAACTGT AGCCATCTAG TTTGTAGCTC TTCGTCATAA TCCCCAACA	1500
TATGTCCACC GATATCATGA CTCCACCAAC TATAACCGAT ATTAGATGCT GTCGCTGTAA	1560
AATAGGGTTG AAATCTTAAG GAATTCCAAC TAATAATAGT ATCCCTTGAA AAACCAACAG	1620
GGTAGCGGTG ACTACCAGGA CCTGCATATC TTGATAAAAT CAAACCACCT TCTGCATTTT	1680
TACAACTATC CTGATAGTGA TAATGGTTTA AAAGCCAAAG TGGATCTAGC ATACCTTGTC	1740
TCCCTTGTTG CCAGTCAATC CACCAAAAAT CTAATCCCTG CTTTCTAGT TCATAATGAA	1800
CATCTTTAAA GTAGGCTTCC CTAAAAGAGG GATTAAAAAA ATCAAAAATA GCAGGTTCTT	1860
CTAGTTCTAC ATTTAACCCC AACCGTTTTCG CGATTGAGG ATAAGCTTCT TCATAAGCCC	1920
GTATCCCATC AGCAGGATGG ACATTTAAGG AGAGTTTTCG CTTTCTATCA TGAAGTTGTT	1980
GCAATAACTG TTCTGGATTT GGTATTAAGT TTCTATTCCT ACTATATCCT GTCCAGCCAC	2040
TTCCAAAGCG AGCTGGAATG TCAGTTATAT GCCAATCCAT ATCTAACACA CCGATAGATA	2100
ATGGAATTTT CTCTGTTTCA AATCTGTCTA TTAAATCCAA GTATTCATCC GACGTATAAG	2160
GCCAATATCT ACTCCACCAA TTGCCTAAAG CATATCTTGG CAACAAGGGT GTTGAACCAG	2220
TCAAATGGTA AAAATCTCTG ATTGCTCCTC TATAATCATG CCCATAGGCA AAGAAATACA	2280

833

GGTCAATTTG	ATTTTCTCTC	TCAATATAAC	CAGATTGTTC	ATCCCAAATA	AATCCTTGAG	2340
AATCATCCAA	TAAGGCTATA	CCATTTCGGC	TAATAATTCC	ATCTTCTAAC	GAGATTGCTC	2400
CATCTGCCTT	ATCCAGAGTC	CGAGCTGTTC	CTTTTAACGT	TTCAATAGAT	TCACCAAAAT	2460
ACCAGCGACT	ACCATATACG	GCAAAATTTC	CTTTTAATTC	TATAAATAAA	TTTTCGGCGT	2520
TAAATTCTCC	TTTATTAAAG	TGCAGATGAA	AATAGTCCGT	CATAATATCT	AGTACGTTTG	2580
ATGTCTCGAT	ATAATCTAAC	GAAATTTGGC	CAAAATCTCT	ATTATAGATA	AGTTGTGTCTG	2640
TTCTATCCTC	AAAAC TTCCA	GTTTGAGAGT	ATTCTAACCT	TACTAGCTTG	TCTGTTAATA	2700
CAGAGATTTCG	ATAAACTCT	CCCTTAAAAA	TTTTCAATTT	GTTTTCTCTC	TTTTATGGTA	2760
GCATAAAAC	AGAACGCACC	ATTTTGTGATG	CGTTTTTCAT	TATTCTGAAT	GCAATGTTCT	2820
ATCTGTTATA	TCTATGACAA	ATAATAGTCA	ATTGAAAAA	TGCAGTGGAC	AAAATATCTT	2880
TTAACAAACC	AAGAGTTTAT	TAAAGAGTTA	TCACTTTTCA	ACTTTTCTAA	GCTTATGCAG	2940
TTGTGAAACA	AACTACTTTT	AACTATTAA	CTAAGATAGG	ATTGATAAAT	AATTTCAAAC	3000
TCTTACTAGC	AATCATACGA	TATTCAAGCT	CACGTGCTTT	TTTCCTTCCT	GCTTATTCTT	3060
TAGAACTGAA	GAACCCGGAT	CGGTATATAA	ATTATCCGGA	TCAACATAGT	CATAAGATTC	3120
ATAACAGTTG	CGCTTCATTA	AGTCATCCCC	AGAGCAAGAG	CTTCATCTCG	TAATTTTTC	3180
ACATCACTAA	CCGTAGGTCG	CCATCCTTCA	ATCATATTTG	TACTTAAAGC	ATACCAAACA	3240
CTCTTAAAAA	CGGATCGGTT	TTCAAAAGCT	ATTCCCATGA	TTGTCATCTT	TTCTTTTATCT	3300
ATATCTAAGG	ACATATGCTA	CCTCCTTTAG	ATACATPATA	CCATGTTTCT	CTGTAGCTTT	3360
TAAAAATTTT	ATTTTGTTTG	TCATATCTAA	GTTTTCAGCA	CGCTTATCCT	ATTTTATAAG	3420
CCTCAAACCC	AAATATAAAA	CGCATTCCTT	TTGCTTTTTT	ACTATTGTAT	CGTATTCTAC	3480
GATAACATAC	TTTACTTTAT	TGTTTTTTTA	AATAACAGCA	GTTCCCTGTT	TATCAACTAT	3540
TCGAACTACT	TTCTATTTTG	CTTCATACCC	TACATAGCGA	AAAAATATGA	AAAAGCAGAG	3600
AAGAATATCT	TAAAAAGACC	TCTTCACTGC	TAATATTAAC	ACTCATTATT	TAAACTATAT	3660
GGATPCTATC	ATCGAGTATA	CTTTTTTACT	TATTAGATAC	CTTGCTCTTC	TTTCACCAAT	3720
TTTTGATCAT	ATACACGGAT	GAATGGAAGA	TAGACTAGGA	ATGCTGCAAA	TGCACATACT	3780
AGAGCAACTA	ATACAGCTCG	AAGATCTGCT	GTCCCTAAGA	AAGCTCCAAT	CCCTACTGGA	3840
GTTGGCCATG	GAACCTGTGC	GATAATTGGC	TTAATAAAGT	TTAGAGAAAT	CGCTACGTAA	3900
TAAATAGTAG	CAGTAACCAT	TGGTGCTAAA	ATAAATGGTA	TAGCCAAGGC	TGGATTATAG	3960
ATAATAGGTA	ATCCAAAAAT	TAATGGTTCA	TTAATATTAA	ATAAGGCTGG	AACTACAGAT	4020

834

GCTCGTCCTA TTGCTTTAAG CTGTTTCAGAT TTAGAGGCAA AAGCAATATA TAAACATAGT	4080
CCTAAAGTTG CACCAGAACC ACCTGCAATT ACAAACATAT TAGAAAATTC ACCTGCAACA	4140
GCGAAGTGCC CGCCAGCAGC ATTTTCAGCC ATGTTAGCAA GAGCAATTGG ACTAACAAAT	4200
GCAAAAACAA TGTTGCACC GTGGATACCT ACAATCCAAA GTAGTTGAGT CAATAGATAA	4260
ATAATCATTA AACCAATCCA CGAATTAGTC AGATTGGATA CAAAACCAA TGGAATTGCA	4320
ATGACTTTAA AAATATCTGT TCCCATTGCT ACAAGAAGAC CGTTGATAAA GATAACAACA	4380
AATGCAACAA CAAATCCCGG AACCAAAGCG GTAAATCCAC GAGAACTCC TTCTGGAACA	4440
GCTTCAGGCA TTTTAATAAC CCAATTATGT TTAACACACA TACGATAAAT AAGAACAGTC	4500
ACAATTGCCA TAATGATTGC GGTAAAAATC CCTGTTGTCC CAAAACGTGC GACTACATTT	4560
CCCATTGCCC ATCCATCTGC AATTACTGCA CCTTCTTTTA GACTTGTCAC AGTCTTCATC	4620
ATTCCACCAT CAAAAATGAT TTGCGGTACT GTCATGACAA AAGCCATCAA GGCAAGCAAG	4680
GCACCATTAA GAGGATTTCAT ATTGAGTTCT TCTTCTCTG CATAAATTTT TGTCAATTCA	4740
TATGCAAGTG ATAGAACGAA ATAAAGAGAT AGAGAACCCA TAGTCGCATA GTTTGCAACC	4800
ATGTAAGTG ATGTGAATTT ATCAAATGAA GCAGAGAAAA TATCTGCCAC AATTGGCCAA	4860
AATGAGAAAAG CTGTGGCAA AATACTGAAT ACCAAAAACA TTGATCCTAC AATAGTAAAT	4920
GGTACAGCAG CCATACCTGC AGCCGTGATA GCACGTACTA CTTTAACTG AGCAAGTTTG	4980
CCCATTGGTC CCATAACATG GTTTTCAAGA AAACCAAACA ACCCGTTTG TTGATCCATA	5040
AATAGACCTC CTTAATAAAA CATAATAATT TTTACTTTCT AAAGACTAGT TTCAAATACA	5100
AATTATACTA GATCAGGATT ATAACTAAG TGAGTTCTTT TCCAATTGGA CAAATGTGTG	5160
ATAAGCCTTA TCTGTTCTGT TATAAATTTT TTTAATTCTT CTAATGTCTA ACAAACTCAG	5220
AACTAAACCT AATAGAAGAA CTACAAAAC AAATAAACGT GCTACTTGGT TATTTTCAA	5280
AATCGGAAAA AGATTCTTAA ACCAACTTGT CCAAGTAAA ACAAGTAATC CTATTGAAAT	5340
AAGCATTTGT ATTCTAACAA ACATTAGTGT TATTTCCAAC TTTTCTTTCC TATTTCCATA	5400
AAGTTTAAAT TGTTCACAG TTGCTAAAAT AGAAAATACT ATGAGCATAA TGGGGAAAAT	5460
AATAATAGGC GAGGGACTAA TAACTGACT CAAAAGCCAA TAAATATTCC CAAAAAGAA	5520
GAGTGCTATT GAATAACGTA GAAGAAGATA TCGATTGAAA AAAGTATTAG TTAGAGCCAT	5580
CTCTCGACGT TGTGTTCAA TCTTTGTGCG TTCTTTTFTA TCCATATCAT TTCTCTCTTA	5640
TATAACAACA CATATTTAGT TAACTTTCTT ATAAAGAGCT AACATTTCCCT TTGCTACTTC	5700
TAATAATGTC ATAGTGGTCA TTAAATGATC TTGAGCATGT ACCATGATAA TTTCAATTTT	5760
AATTTCCACT CCACTTGCGT ATTCTTGCAA GAGTTTGGTT TGTGCATGAT GCGCTTCAAG	5820

835

AATTATCTCA	TTTGATTGAT	TTAATTTACT	TTCTGCATCA	TCAAAACTAC	CTTCTCTCAT	5880
TTTTGCAAAT	GCTTCATGTA	TTTCTGACCT	TGCATTTCCC	GAATGCAGGA	TAATTTCAAA	5940
TGCTGCAACC	TGCAGTTCCT	CTTGATTCAT	ATAAACCTCC	TATTTTATCT	TCTCAAATAT	6000
GTTAATAAAA	TCTTCAAAGT	TATTGCAAGA	TATTAGCTGA	TTTTGCAATT	CATCATCTCTC	6060
TGTCAGAGAG	ACTATCTTTT	TAGTCACAGT	TGCCAAACCT	TCGTTCCTCAT	ATATTGATGG	6120
AGATAGAAGA	AATACTAGCT	GGACATGTGA	ACTTTGATTA	TCCCAGAGTA	ACGAATCTTT	6180
ACAAATTGCA	ACCGAAACCT	TTCCCTCTGT	ACCAAAGGC	TGAATAGGAT	GCGGAACTGC	6240
AATTTTTTCA	GAAAAACAA	CTGAACCTAA	TTCTTCGCGC	TGTTTAATTC	CATAAAGTAA	6300
AGATTGTTCA	AACTCATTTG	ATTCACCAAC	AGATAAACTC	TCAACCATCT	TTTCAAGTAA	6360
ATTTACCTTG	TCTGATTCAG	TACATATTAA	AAAGTTTTCT	TTACTAAAAT	ACTGTCTAAA	6420
GCCGTTGTTT	TCAAATTTGT	TAATCTTTGA	TGATTGTACA	TAACTAGAAA	CTTGCATCTA	6480
ATCCATAGCT	TTTCTAATCA	TTCCATCTC	ATCACTCTTA	AGAAACACAC	TAACCTTTAA	6540
AACTGGGATT	TGAAATATA	GATTTGATAA	ATCAATAGCT	GACACTATAA	AATCTATTCC	6600
TTTAAGTTTT	TCTTGATTCA	ATTCATAGTA	GCCTATTACA	TCAACAACTT	CTACTCGCTT	6660
CCCAAACCTCC	GTTTCCAAAC	GATTTCTTAA	CATTGCGGCT	GCACCAAATC	CTGTTGCACA	6720
AATAGCAAGA	ATATTAAACT	TAGTACTCTC	TTTGCTACGT	TCCATAGCAG	CTAAAAAGTG	6780
AAGACTTACA	TATGCTACTT	CATCATCTGA	TATTGTCCAC	TCCAAGAACT	TGTCCATATT	6840
TGCAAGAATT	TCTCTAGTCA	TAAAGAATAT	ATCACTATAA	TTCTGTTTAA	TTTCATCTAC	6900
CAAAGGGTTA	TTTAAGGTAA	TCCGGCTTTC	TAAACGTAAT	TGTAAGTGTCA	TTAGATGAGT	6960
TATCAATCCT	TCAATTAGTT	GGAAATCTGA	AGAAAAGTTA	TACATATCAT	CTAATCCTAA	7020
ATTCTGAAAT	GTTTAAATA	AAGATTTTTT	TAAAACTTCT	TCAGAAATAT	TCTTCTGATT	7080
TTTTTGACAT	TGTTGACTCT	TAGCTAACAA	ATGCAAAGTA	ATGTAGTCTA	TTTCTGTAAC	7140
TGGAAATTCC	TGATTGTGTA	CTTCTCTTAC	TTTAGAAAGA	ATTCTTTGGG	CAACCTTTCT	7200
CTCTATTGCA	TCATCAGTCA	TCTGACAGTC	TATATTTTTT	ATTTCAAATC	CGGATTTTAA	7260
ACGAATCACA	GACAATGCTA	TGTGAACTAC	TAAATTCCTGT	AGTACAAAAT	CAGATAGTTT	7320
TAGGTTGGCC	TCTTGGCATT	CATCCAAAAC	AATTCCTAGCA	AATTCCTCTA	ATGGAACAGT	7380
TTGATCAAAA	AAGTTAAATT	TTACATAGCA	ATGTATTGTT	TTAAAAAATT	GATTCTCTAG	7440
GAAATAATTT	ATGATAAAAC	GTCGTTTATC	ACGTTCCCTCG	CCTGAGACAT	AAACTCCTTT	7500
ATTCGCCCTA	CTCTCAATGG	ACAAATTATA	CTCTGATAAC	ATCACTCGTA	TCTTTCTGAA	7560

836

ATCATGAGAT AATGTTGAAC GACTAACGTA AAGTTCATCA GCTAAATCAT CAAAAAGAAC	7620
TGGAACTTGC TCAATAATA ATTTATTTAA GATAAATACT AAACGATCAT CACCTTTTGA	7680
AACCGCAGTT TTCGTATAGT CTTCTTCCAG TTCATAAGTT TGTCTAAACT CCTGGTAAGC	7740
GCCTTGATTC TCAAAAAATA TTTGATACCC TTGACCTTGT TTTGAAATCA ACCGGACTCC	7800
TTGAATAATC ATTGTCTTCT CAATTAATTT CAGTACATTA CGGACAGTTC TATCTGAACA	7860
GGATAAATAT TCTGCCAGTT CTTTGCTTGT AACAAAACGT TCCTTATTTT TTATTAAAAA	7920
TTGAAGGATA TCTTTCTCTT TAATGTTTAA CACATTCATT CCTCCTAAA ACGTATGTTT	7980
TCATATATTG AAGCATATTA TACACTTAAA TCAGTTTATA TCAAACCTCAA AACAAATTAT	8040
CTTAACCTAA ATATTATTG ACATTTTCATG TGTTCATCAA ATATTCTCAA GAATCAAATT	8100
AGCCATTTTT TCAATTCCCA TTGGAATAGG AATATAGGCT TGAGGAGGTA TTTGTACAAC	8160
TGTTTTTCCT GCTTTAGAAC CAGCCTCTTC AAATTGCTTA AAGTACATTT TTGTTTGAGG	8220
ACTGACAAGA TACAAATCAA AAGCTGCTGC TGCATAGCT TTCCCTCCTT CAGTAGCACT	8280
AATAGCATCA ACTACAATAT CTTTCCCTTT TCCTTTTAGA AACTCTGTTG TTTTCTGTGC	8340
CATAAGTGAT GAAGACATTC CTGCTGCACA AATAATTAAA GCTTTTGCCA TAATATTTTC	8400
TCCTTTTCTT AAATCCAATC AAAGCTGTGC TAAGTTGGCT TATTTGTTAT CTATTTTTAT	8460
TATAAAATAA AGCGTTTCCA ATGACAATTC CCTCATTTTC CTAAATGATA TGGAAAAAAA	8520
TTATTTATAC TTCAATTTAT AAAATAAAAT TATTCCTGAG AGTAGAAATG AAACACTATT	8580
TGCTAAAATC AAAGGCAAGT CTCCTATACG AATACCATGA GCAAGCCACA ATGCAATACC	8640
AATAACTTGC ATAACATACA TACCTAGAGC AATAGATCCT GTGTCCTTTG TCTPAACTAC	8700
ACGAAAAACT TGTGGTAAAA ATGCAAATGT TGTTAAAAAT GCTGCAATAC TTCCAATCAT	8760
ATGTCACCTC AATATGCTAA ACAAACTGAG AATAATCTCA GTTTGTTTAT ACTATTCTAC	8820
TGATTACCG TTAGATGAAA TAACTTCCTT ATACCAGCCA AAAGATTTTT TCGGGGAACG	8880
ATTATAACTT CCCTTCCCAT TATCATCTTT ATCTACATAA ATAAAGCCAT AACGTTTCCG	8940
CATTTACCG GTACCAGCTG AAACCAAATC AATACATCCC CATGGAGTAT AACCCATTAA	9000
ATCAACACCA TCTTCAACTA CAGCCTTTTT CATTTACGA ATATGGGCAC CTAGATATTC	9060
AATTCTATAA TCATCATGTA CCATACCATC TGCTGCAACT TGATCTATAG CTCCAAAACC	9120
ATTTTCAACA ATAAAGAGTG GTAAGTGATA GTGGTCTGTA AACCAATTTA ACGCATAACG	9180
CAAACCTTCT GGATCAATTT GCCACTCCCA TTCAGAAGCC TTAACATAAT TATTTTTCAC	9240
TAAATCTTCT GTTCAAGAT AATCAAAATA AGGATTATTT TCACGATGAG AGTCGATAGC	9300
AAAGGACATA TAGTAACTGA AACCAATGTA ATCTACAGTC CCACCAAGTA AATCTTCTTT	9360

837

ATCCTGGGCA GTAAATCAA CTGAAATACC TTTTCGTTCC CAATACTTGA AAATATGCTC	9420
AGGATATTTA CCTAAAACAT GCACATCAGC AAAATAATAA CGCTTCTGCA TAGCTTTTCAT	9480
TGCCATTAAAG ATATCCTTAG GATTGCAAGT AACTGGATAA ATTGGACACA TCGCAATCAT	9540
ACAACCTATT TGAAATCTG GATTAATCTC ATGACCAATT TTTACAGCTC GTGCAGAAGC	9600
AACTAATTCG TAATGTGCTG CTTGATACAT AATTGCTTCT CTATTATCAC CTTCTCATA	9660
TACAATACCT GAGTTAGTAA ATGGTGCAA ATCTTCCTGA TAATTCGCTT GATTATTGAT	9720
TTCAATTGAAA GTCATCCAAT ATTTAACCTT ATCTTTGTAA CGTTTAAATA CGACTTCTGC	9780
AAAACGAGCA AAGAAATCAA TCAATTTCCT ATTTTCCAA CCACCATATT CGGTCACTAA	9840
GTGATAAGGC ATTTCAAAAT GAGATAGAGT GATGACAGGT TCAATACCAT TCTTTAAGCA	9900
TTTCATCAAAA AGATTATCAT AAAACTGTAA TCCTTCTTCA TTCGGCTCTA ACTCATCACC	9960
TTTTGGAAAG ATACGTGTCC ATGCAATAGA GGTACGGAAG CACTTGAATC CCATTTTCAGC	10020
AAAAAGTGCT ATATCTTCTT TATAACGGTG ATAAAAATCT ATCGCCTCAT GATTTGGATA	10080
ATATTTACCC TCTAAAACTC CCAAAGTAAT TTCACGAGCT ACTCCATGAC GACCAGCAGT	10140
CATAACATCA GCAACACTAA TTCCCTTGCC ACCTTCTTGC CATCCACCTT CAAGTTGATG	10200
AGCAGCAACA GCACCACCCC ATAAAAATCC ATCTTTAAAA GTAGTCATCT TTTTCTCCTC	10260
TGACTTTGAT ACTCTTATTA TAAACCTTAA ACCAAAAGAT GAAAACGCAT TCTTTTCTCT	10320
TATTGTAAAG GAAAGAAGTA ATTTTAAATG GAAATAGAAC AATATCTTCT TGTATTCTCG	10380
TAATGATATC TTTACGATT TCAATACTTT CAACTACAA AAACCTCTAC AATAATTCTA	10440
ATTCCTGTG TCTATAAAG ACTTATCGCT TTCTGGCATC CCAGAATCAT CTTCTATATA	10500
ACGTTCAACT TGCATCTGCA AGTGATATTT TTTCTTAAA TCTAAGATTT TCTGCATTGT	10560
CTTTGATTGA TAATGTTTAT CTAAAGTTT TTTGATTATC CACTGATCAA TAAGGAGAAT	10620
AGTTCCCTCT TTTTCAATTG GTAAAAATA TTCGTATTT AAGTTACCTT TTTGATTTCT	10680
AATTTCTTTA ACAAGGCCAC TATCAAGCAT TTCTCTTGCA AACTTTATTG CACTATCTCC	10740
ATCACCTTTA TAATATACAT GAATAGTCAA TGTATCTTA TATCCTCCAA AATCATCCTT	10800
CAATTTTAAA AAAACAAGTT TAGATGAGGA TCTAACTTG TTTTATGA ACTAATTATC	10860
TACGTTTCG CCATTACTTT CAATCACTTC TTTATACCA TAAATGATT TTTTCTTATA	10920
GCGATTATA GTCAATTGAA ACAAGAGCAG GACAAAAGAG CCTCATAAAA GGTATTGCAA	10980
CTTGGTAATA CCTTTTGTAG GTGCTTTTGT ATATGAGCCC ATGTTTCTC AATAGGATTG	11040
TACTCAGGTG AGTAGGGAGG AAGAGGTAAA AGTTTATACC CAACTCTTC ACACAAGAGT	11100

838

TCTAGCTTCC CCATTCTATG GAATCTTGCA TTATCCATAA TAATAACCGA TGGTGTGGTT	11160
AATGTTGGTA AGAGAAACTT CTGAAACCAA GCTTCAAAAA AGTCGCTCGT CATCGTCTCT	11220
TCGTAAGTCA TTGGAGCGAT TAACTCACCA TTTGTTAGAC CTGCAACCAA AGAAATCCTC	11280
TGATATCTTC TTCCAGATAC TTT	11303

(2) INFORMATION FOR SEQ ID NO: 116:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3112 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:

CCTTAGATTT CCACTTGCCA GAGGAATTGA TTGCCCCAAC GCCCCTTGAA AAACGTGATG	60
CCTCCAAACT CCTCATCGTC AACCGTGAGA CAGGAGAAAT GCAAGATAAA CATTTCCACT	120
CTATTATTGA TATGCTGGAA CCTGGTGATG CCCTTGTCAT GAACGACACC CGAGTTCTCC	180
CTGCCCCGCT CTATGGTCAA AAAGTGAGA CAGGAGGTCA TGTGGAAGTT CTCCTCCTTA	240
AGAACACTAG TGGAGACGAG TGGGAAGTTC TGGCTAAACC TGCCAAACGC CTCAAGGTCG	300
GTACTCGTAT CAGCTTTGGT GATGGCCGCC TCAGCGCTGT CGTTACAGAA GAATTGACCC	360
ACGGGGGACG CATGTGCCG TTTGAATACC AAGGAATTTT CCTAGAAGTC TTGGAAAGTC	420
TGGGAGAAAT GCCTCTGCCA CCTTATATCC ACGAAAAATT AGATGACCGT GAACGTTATC	480
AAACCGTCTA CGCCAAGGAA AGTGGCTCTG CTGCAGCACC GACTGCTGGT CTTCACTTCA	540
CCAAAGAACT GCTGGCAGAA ATCCAAGCTA AGGGTGTTC TCTAGTCTAT CTGACTCTCC	600
ATGTCGGACT CGGAACCTTT AGACCTGTTT CTGTGGATAA TCTGGACGAA CACGAAATGC	660
ACTCAGAGTT CTATCAACTT TCTGAGGAAG CTGCTGCCAC CCTTCGCTCT GTCAAAAAAA	720
ATGGTGGTCG TGTATCGCT GTCGGAACCA CTTCTATCCG CACCTTGGA ACTATTGGTT	780
CCAAGTTTGA TGGGCAAATC CAAGCAGATT CTGGTTGGAC CAATATCTTT ATCAAACCTG	840
GGTATGAGTG GAAGGTCGTG GATGCCCTTCT CAACCAACTT CCACCTGCCA AAATCAACTC	900
TGGTCATGTT GGTTCCTGCC TTTGCAGGCC GTGAATTAGT CTTAGATGCC TACCACCATT	960
CCATCCAAGA ACACTACCGC TTCTTCAGTT TTGGTGACGC CATGTTTATT TATTGAGAAA	1020
GAATTTCTCT AAATCTTCTA ATACCAATAA ATCGCTAAGA TATTATTTCA AAGAACATCT	1080
ACAATTGAAA CTCTAGCTAG CTGTAGAAGA GGCCTAGTAC ATTGAAATTA AAATGCTTCC	1140
CCCTAGCTTC GAAAATATG CCATAGATTG CGTTGACTCT CCAAATTGAT TCATCTATAT	1200

TTTATTTTCAG CTTCTTATAC TTTCTTCGCT GTTTGTAAAT CAAAATGCAA GACACATGAG	1260
TAGCACCATA TTTGTTACTC TTATCTGTCC TCTCAAGAGA CTATTATGAG TTATTTTCAGA	1320
ATCATTCACT ACTTTGACCC TGACTCTCCT TAGTCTCAAA ATCAAAGACT TATACTCTTC	1380
AAAAATCTCT TCAAACCGCG TCAACGTCAC CTTGGATTAT ATATGTGatC TGactTCGTC	1440
AGTTCTATCT ACAACCTCAA AGCAGTACTT TGAGCAACCT GCGACTAGTT TTCTAGTTTG	1500
CTCTTTGATT TTCATTGAGT ATTAAACAAA AAGTGAACAA ATCTGAATTC TAATGTACAG	1560
AAGACTAGGC TTGTTCACTT TTTTATAGTC GCTATAAGAT GACCTTATCT ATAGCTTTTT	1620
ATATATAATT ATATATTCAG ACATACTATT ATCAATTTTG TCGCAGGGAG GAATCTGTTA	1680
ACGCACCCAT TCACCATTAT CATTGACTCT ATAGCCATCT ATACTTGTAT TGACCGCTAA	1740
CTCACCCGAT GTATTTACAT AATACCATT ACCACCAACT TGGAAACCATT GATTGACTTT	1800
CATAGAACCG TTGCTGTTGA GGTAGTACCA TGAACATTA ACTTGTACCC AACCTGTTGC	1860
CATGGAACCA TCAGTATTAT AAAAATACCA CATACCATT TCTTGTTTCC AGTCTGTTGT	1920
TGGAGCAACT GCTTTAGCTG GTTCTACTGC TACATCTGTT CCTTGGTTAG ATGTAACAGA	1980
TACAGGATAC GAAGGAATAG ATGATTGCTC AGGAACAACA ACTTTTTTCAG GTTCTCTCGT	2040
CCCTCTCCTT ATACGTCTTT TTACCATCTC TTTAGTAATT TGACGAGAAG TAGTTTCTTC	2100
AATTGTTCCA TCACGTTTAT CTACAGTATA GATTGTAGTA AGAGTAATTT ACCAATTTCT	2160
CCTACTTCTT CTACTTCTTG ACTTTTATCA AGAGTTGGGC CATCGAGATA TTCTGTTTCG	2220
ATTGGAATTT CTGGACAAG AACTTGGGGC TTGGTTCTTT TTTTAACAAC TCTTGTTTGA	2280
GAGTCTTTTT TTTGACTTAA AGTACTCTCA GTTACTTGTC CACTCTTTCC ATCTACATTA	2340
TAAGTTATCG TTGTAACGTG TTTCCCATTC TTTCCTAGAG TAATCTCTTG CTCCTGTCTT	2400
GCAGAAAGGT CATTGTCTGC TTCATATTTA GTAGCAAATG GAACAAGAAC TTCTTCAACC	2460
TTGCTTTTAG CTGGAACCTT GATAACTGTA TCCGTGGCTT CTTTTCTATC AACAGTAACC	2520
TGTTTCGGTAA CATAACCACT CTCTGGATTA ACATCGTAGG TCCTTGTCGT AGTTACATAG	2580
CCATCCTCTC CATCAATTGT AACAGGATTT TCACTACGGT CTTTGTGTTT ATCTTTTCA	2640
TAACGAATTC GCGTACTTGA AATTTTCTTG GTTACTACCT TAGGTTTAGT CGCTACTTTT	2700
ACAATAATAT CCCCATTTGTC AGCGTCATCA TACTCTATTC CCTCTTCTTT ATCTCTAGTA	2760
TCATCTCTGA CATATTGAAT CCCATCAGCA GCATGAACAA AACTTGTATT CAGATTCCCTC	2820
CTAAAAATAA AGTTAGCCCG ATTACCGCAG AACCAAAAAT CTTTCCGAGT TTACGTATTG	2880
CATAGCGCTT ATTAGTATTA GATTTTGCCA TTACATCCTA CTCTAGTAT AGCATCTTTT	2940

840

CTATCAAACG TTAAACAATA TACGTTATAT ATAAAAATAGA CTTAGAATGA TATATTGATT	3000
ATTGAACTAA CACTTTAACT ATATCGTAAT CAATCTCATA TATAAAGGAT TGCAGACATC	3060
TTATCTAAAT ACATGCGAAT ATATTTAGAT ACAAACATTC CAACTTGATA AT	3112

(2) INFORMATION FOR SEQ ID NO: 117:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4327 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

CCCCAAAATC TCTTCAAACC ACGTCAGCTT CGCCTTGCCG TAGTATGGTT ACTGACTTCG	60
TCAGTTCTAT CCACAACCTC AAAACAGTGT TTTGAGCATC ATGCgGCTAG CTTCTTAGTT	120
TGCTCTTTGA TTTTCATTGA GTATAAAAC AGATGAGTTT CTGTTTCTT TTTATGGACT	180
ATAAATGTTT AGCTGAAACT ACTTTCAAGG ACATTATTAT ATAAAAGAAAT TTTTGAAAC	240
TAAATCTAC TATATTACAC TATATTGAAA GCGTTTAAA AATGAGGTAT AATAAATTTA	300
CTAACGCTTA TAAAAAGTGA TAGAATCTAT TTTTATGTAT ATTTAAAGAT AGATTGCTGT	360
AAAAATAGTA GTAGCTATGC GAAATAACAG ATAGAGAGAA GGGATTGAAG CTTAGAAAAG	420
GGGAATAATA TGATATTTAA GGCATTCAAG ACAAAAAAGC AGAGAAAAAG ACAAGTTGAA	480
CTACTTTTGA CAGTTTTTTT CGACAGTTTT CTGATTGATT TATTTCTTCA CTTATTGGG	540
ATTGTCCCCT TTAAGCTGGA TAAGATTCTG ATTGTGAGCT TGATTATATT TCCCATTATT	600
TCTACAAGTA TTTATGCTTA TGAAAAGCTA TTTGAAAAAG TGTTCGATAA GGATTGAGCA	660
GGAAGTATGG TGTAATAGC ATAGGCTGAT GTCCATCATT TGCTTATAAA GAGATATTTT	720
AGTTTAATTG CAGCGGTGTC CTGGTAGATA AACTAGATTG GCAGGAGTCT GATTGGAGAA	780
AGGAGAGGGG AAAATTGGCA CCAATTTGAG ATAGTTTGTT TAGTTCATTT TTGTCAATTA	840
AATGAACTGT AGTAAAAGAA AGTTAATAAA AGACAACTA AGTGCATTTT CTGGAGTAAA	900
TGTCTTATTT CAGAAATCGG GATATAGATA TAGAGAGGAT CAGTATGAAT CGGAGTGTTT	960
AAGAACGTAA GTGTCGTTAT AGCATTAGGA AACTATCGGT AGGAGCGGTT TCTATGATTG	1020
TAGGAGCAGT GGTATTTGGA ACGTCTCCTG TTTTAGCTCA AGAAGGGGCA AGTGAGCAAC	1080
CTCTGGCAAA TGAACTCAA CTTTCGGGGG AGAGCTCAAC CCTAACTGAT ACAGAAAAGA	1140
GCCAGCCTTC TTCAGAGACT GAACTTTCTG GCAATAAGCA AGAACAAGAA AGGAAAGATA	1200
AGCAAGAAGA AAAAATTCCT AGAGATTACT ATGCACGAGA TTTGGAAAAT GTCGAAACAG	1260

841

TGATAGAAAA AGAAGATGTT GAAACCAATG CTTCAAATGG TCAGAGAGTT GATTTATCAA	1320
GTGAACTAGA TAAACTAAAG AAACCTGAAA ACGCAACAGT TCACATGGAG TTTAAGCCAG	1380
ATGCCAAGGC CCCAGCATT CATAATCTCT TTTCTGTGTC AAGTGCTACT AAAAAAGATC	1440
AGTACTTCAC TATGGCAGTT TACAATAATA CTGCTACTCT AGAGGGGCGT GGTTCGGATG	1500
GGAAACAGTT TTACAATAAT TACAACGATG CACCCTTAAA AGTTAAACCA GGTCAGTGGA	1560
ATTCTGTGAC TTTACAGTT GAAAAACCGA CAGCAGAACT ACCTAAAGGC CGAGTGCGCC	1620
TCTACGTAAA CGGGGTATTA TCTCGAACAA GTCTGAGATC TGGCAATTTT ATTAAGATA	1680
TGCCAGATGT AACGCATGTG CAAATCGGAG CAACCAAGCG TGCCAACAAT ACGGTTTGGG	1740
GGTCAAATCT ACAGATTCGG AATCTCACTG TGTATAATCG TGCTTTAACA CCAGAAGAGG	1800
TACAAAAACG TAGTCAACTT TTTAAACGCT CAGATTTAGA AAAAAACTA CCTGAAGGAG	1860
CGGCTTTAAC AGAGAAAACG GACATATTCG AAAGCGGCG TAACGGTAAC CCAAATAAAG	1920
ATGGAATCAA GAGTTATCGT ATTCCAGCAC TTCTCAAGAC AGATAAAGGA ACTTTGATCG	1980
CAGGTGCAGA TGAACGCCGT CTCCATTCTGA GTGACTGGGG TGATATCGGT ATGGTCATCA	2040
GACGTAGTGA AGATAATGGT AAAACTTGGG GTGACCGAGT AACCATTACC AACTTACGTG	2100
ACAATCCAAA AGCTTCTGAC CCATCGATCG GTTCACCACT GAATATCGAT ATGGTGTGG	2160
TTCAAGATCC TGAAACCAA CGAATCTTTT CTATCTATGA CATGTTCCCA GAAGGGAAGG	2220
GAATCTTTGG AATGTCTTCA CAAAAAGAAG AAGCCTACAA AAAAAATCGAT GAAAAACCT	2280
ATCAAATCCT CTACCGTGAA GGAGAAAAGG GAGCTTATAC CATTCGAGAA AATGGTACTG	2340
TCTATACACC AGATGGTAAG GCGACAGACT ATCGCGTTGT TGATAGTCCT GTTAAACCAG	2400
CCTATAGCGA CAAGGGTGAT CTATACAAGG GTGACCAATT ACTAGGAAAT ATCTACTTCA	2460
CAACAAACAA AACTTCTCCA TTTAGAATTG CCAAGGATAG CTATCTATGG ATGTCCTACA	2520
GTGATGACGA CGGGAAGACA TGGTCAGCTC CTCAAGATAT TACTCCGATG GTCAAAGCCG	2580
ATTGGATGAA ATTCTTGGGT GTAGGTCCTG GAACAGGAAT TGTACTTCGG AATGGGCCTC	2640
ACAAGGGACG GATTTTGATA CCGGTTTATA CGACTAATAA TGTATCTCAC TTAGATGGCT	2700
CGCAATCTTC TCGTGTATC TATTGAGATG ATCATGGAAA AACTTGGCAT GCTGGAGAAG	2760
CGGTCAACGA TAACCGTCAG GTAGACGGTC AAAAGATCCA CTC'TCTACG ATGAACAATA	2820
GACGTGCGCA AAATACAGAA TCAACGGTGG TACAATAAAA CAATGGAGAT GTTAAACTCT	2880
TTATGCGTGG TTTGACTGGA GATCTTCAGG TTGCTACAAG TAAAGACGGA GGAGTGACTT	2940
GGGAGAAGGA TATCAAACGT TATCCACAGG TTAAAGATGT CTATGTTCAA ATGTCTGCTA	3000

842

TCCATACGAT GCACGAAGGA AAAGAATACA TCATCCTCAG TAATGCAGGT GGACCGAAAC 3060
 GTGAAAATGG GATGGTCCAC TTGGCACGTG TCGAAGAAAA TGGTGAGTTG ACTTGGCTCA 3120
 AACACAATCC AATTCAAAAA GGAGAGTTTG CCTATAATTC GCTCCAAGAA TTAGGAAATG 3180
 GGGAGTATGG CATCTTGTAT GAACATACTG AAAAAGGACA AAATGCCTAT ACCCTATCAT 3240
 TTAGAAAATT TAATTGGGAA TTTTGTAGCA AAAATCTGAT TTCTCCTACC GAAGCGAACT 3300
 AGAGAGATGG GCAAAGGAGA GATGGGCAAA GGAGTTATTG GCTTGGAGTT CGACTCAGAA 3360
 GTATTGGTCA ACAAGGCTCC AACCCTTCAA TTGGCAAATG GTAAACAGC GACTTTCCTA 3420
 ACCCAGTATG ATAGCAAGAC CTTGTTGTTT GCAGTAGATA AGGAAGATAT CGGACAGGAA 3480
 ATTATTGGTA TAGCTAAAGG AAGCATCGAA AGTATGCATA ATCTTCCTGT AAATCTAGCA 3540
 GGTGCCAGAG TTCCTGGCGG AGTAAATGGT AGCAAAGCAG CGGTGCATGA AGTTCAGAA 3600
 TTTACAGGGG GAGTTAATGG TACAGAGCCA GCTGTTTCATG AAATCGCAGA GTATAAGGGA 3660
 TCTGATTGCG TTGTAACCTCT TACTACAAAA AAAGATTATA CTTACAAAGC TCCTCTTGCT 3720
 CAGCAGGCAC TTCCTGAAAC AGGAAACAAG GAGAGTGACC TCCTAGCTTC ACTAGGACTA 3780
 ACAGCTTTCT TCCTTGGTCT GTTTACGCTA GGGAAAAAGA GAGAACAATA AGAGAAGAAT 3840
 TCTAAACATT TGATTTTGTA AAAATGGCTC TTTGTCAACT GTAGTGGGTT GAAGTCAGCT 3900
 AAGCTCGAGA AAGGACAAAT TTTGTCCTTT CTTTTTTGAT ATTCTAGAGCG ATAAAAATCC 3960
 GTTTTTTTGAA GTTTTCAAAG TTCCGAAAAC CAAAGGCATT GCGCTTGATA AGTTTGATGA 4020
 GATTATGGT CGCTTCCAAT TTGGCGTTAG AATAGTGTAG TTGAAGGGCG TTGACGATTT 4080
 TCTCTTTGTC CTTTAGAAAG GTTTTAAAGA CAGTCTGAAA AAGAGGATGA ACCTGCTTTA 4140
 GATTGTCCTC AATGAGTCCG AAAAATTTCT CCGGTTTCCT ATTCTGAAAG TGAAACAGCA 4200
 AGAGTTGATA GAGCTGATAG TGATGTTTCA AGTCTTGTGA ATAGCTCAAA AGCTTGTTTA 4260
 AAATCTCTTT ATTGGTTAAA TGCATACGAA AAGTAGGGCG ATAAAAATGT TTATCGCTGA 4320
 GTTTACG 4327

(2) INFORMATION FOR SEQ ID NO: 118:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3521 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

CTCTGGCCCT GCCACTCCAA CGTTTTGTCA GGGTGCTTTT TTCATAAAGG AGTTCTTATG 60

843

TTAGATATCA AACGTATTCTG TACAGATTTT GAAGCTGTCTG CAGAAAAATT AGCTACACGT	120
GGTGTAGATG CTGCTGTCTT GAATGAAATG AAAGAAATCG ATGCTAAACG TCGTAACATC	180
TTGGTCAAGG TTGAAACTCT CAAAGCAGAA CGTAACACAG TTTCTGCTGA GATTGCCCAA	240
GCTAAGCGCA ACAAGGAAAA TACAGATGAC AAGATTGCTG CCATGCAAAA TCTATCTGCT	300
GAGGTTAAAG CCTTGGATGC TGAATTGGCA GAAATCGATG CTAAATTGAC AGAATTTACA	360
ACGACTCTTC CAAATATCCC AGCTGACAGC GTTCCTGTTG GGGCTGACGA AGACGACAAT	420
GTGGAAGTTC GCCGTTGGGG TACTCCACGC GAGTTTGACT TCGAACCTAA AGCTCACTGG	480
GATCTCGGTG AAGACCTTGG TATCCTTGAC TGGGAACGCG GTGGTAAGGT AACAGGCGCT	540
CGCTTCCTCT TCTATAAAGG CCTCGGTGCT CGTTTGGAAC GTGCTATCTA CAACTTTATG	600
TTGGATGAAC ATGGAAAAGA AGGCTATACT GAAGTCATCA CACCTTACAT AGTCAACCAT	660
GATTCTATGT TTGGTACTGG TCAGTATCCA AAATTTAAGG AAGATACTTT TGAAGTCAGC	720
GATACCAACT TTGTCTTGAT TCCAACTGCT GAAGTTCCTC TGACAAACTA CTACCGTGAT	780
GAAATCTTAG ACGGCAAAGA TCTTCCAATC TACTTCACTG CCATGAGTCC GTCATTCCGT	840
TCTGAGGCTG GTTCTGCCGG TCGTGATACG CGTGGCTTGA TCCGTTTGCA CCAATTCCAC	900
AAGGTTGAAA TGGTCAAATT TGCCAAACCA GAAGAATCTT ACGAAGAATT GGAATAAATG	960
ACAGCCAACG CTGAAAACAT TCTTCAAAAA CTCAACCTTC CATACCGTGT CGTTGCTCTC	1020
TCTACTGGAG ATATGGGCTT CTCAGCTGCG AAGACTTACG ACTTGGAAGT GTGGATTCCA	1080
GCACAAAACA ATTACCGTGA AATCTCAAGC TGTTCAAACA CAGAAGATTT CCAAGCCCGT	1140
CGTGCCCCAA TCCGTTACCG TGATGAAGCA GATGGCAAGG TGAAACTCCT TCATACCTTG	1200
AACGGTTCTG GACTTGCACTG TGGACGTACA GTGGCTGCAA TTCTTGAAAA TTACCAAAAT	1260
GAAGATGGTT CTGTGACCAT CCCAGAAGCA CTTCTGCCAT ACATGGGTGG AGCTGAAGTC	1320
ATCAAACCAT AAAAAATAAG GTTTAGCTAT TTCTAGCTAG ACCTTTTTTC GTAACCAAT	1380
CAGATAAGCA CCTAGTACAA AGAATAAAAT AGTTAGGCAT ATAATGGTTT CAGCCAATAC	1440
CAGGTAATCC AGAAATGGAA GTTTCAAAAT TCCCTGAGCC ATCTTGAGCG AGGTCTGCTG	1500
GATAATGGTT GGAAGGTGA GGGCTGAGAA GGCTGGTTGA AAACCTTGTT TTAAATGTT	1560
GGGCAGACGA GTTAAACAA AGAAAAAGAA GGATTGAGAA GCCAAATCA TGACAATCAA	1620
GACCCAAGTC GGCAGGCTGG TTCCTCCTAC TCGAACTAGA GAAGCCAAGA GTAGAGAGAA	1680
AGGAGCACAG TAGATTCCTT CTTGTCCAAG CAAGGCTAGT GGGAGTGGAT GTTCTTTTAA	1740
ATCGCTATAA ATAAGGGGAT AGAGATAGAA GGTCAAGAGA AAACCAAAAC TCAAGGTCGC	1800

844

ATAGGCAATT TCGATAATAC CTACCAGAGG ATAGGTCAAG GCAGCCACTG CTATCCCCAC	1860
ATAGAGAACC GTCCAGCTTG GAGTGGCATG AACCTCCGC CCTGGACAAG CAAACTTGAT	1920
GGTAAAACCA GCAATCAAGG TCAAAATCCA GAGAAATGAA AACCACCAA TCCCTTGTGC	1980
TACCAAAGGA AGATAAGAGA ATACGCGAAA GACATAGGTC GATAAAATCA TCCCAGCCAT	2040
AGGAAAGGTT GCCATTCTCG ACAAAGAGG GGGCTTGGTC AATCTTGCT TGGTTCTTT	2100
CCAATTAAAG AGATGCAGAA TTAGAAAGTA AATCCATAAA ACCAAACCAA TCAGACTAAA	2160
AAGATGGGAT AGAACCGGCA ACGTATCTAA AATAAGATTT CCAGCTCCTG CCAAACCTAG	2220
CAACAACCT GAAATACTA AGGGGAGTTT TTTTCATCCTA ACCTCCAATA ATCATGTTAG	2280
TTTCAGTATA ACATAAAGC GCTTAAATGA GGATTTAAAA AAACGAGTCC GCTTATTTCA	2340
GACTTCATTT TACTCAGATA TGAATTAGGC ATAAGGTTGC AATCTGGAT TAATTGGTGT	2400
ATTAGCTAAG TTGTTGGCAT AGTTACAGAG GATTGCTAGG CTGACACCAA AAACCACATC	2460
CAAGGCATTT TGTGAGTGT AGCCAGCTTC TAAAACTCA GACAAGGCTT CATCTCCTAC	2520
ACGACCCTTG GTATTGATAA CTGCCAAGGT AACTTAGCT AGGGTATCCA ATTTAGGATC	2580
TGTTTCAATT GGAGTACGAT TGCGAAGAGC TTGAATCAAG TCATCATTC TCTGGATTG	2640
TTTGATGGAA AAGGCTGTGT GACCTGCGAC ACAGAAGGCA CAACCATTGG TCACGGCTGC	2700
CGTGATTGTC ACCACTTCAC GCTCAACGGG TGTGAGGCTG TTGCGACGGT GGATAGATGA	2760
GACAATTGCG TAGGCTTCTA AAACAGTCGG GGCATTGGCC AAGAGACCGA TTAGGTTGGG	2820
AATATAGCCA TTGTTGTCTT TTTCTACTGT TTCAAGAATT TCTTTCACCT CTGCTGGTGC	2880
TGACTCTACT GTATGGATAG TAAATGTTGT CATAAGATAC CTCTTTTCTT ATTATTGACA	2940
CTAATATTAT TGGAAAATCT TATAAAATCC TGATTCCTAA GTTTATCTAA GATAAAGCTT	3000
TATTCTCTCA TAAGATTTTC GTTGTATAT TAGTTTATCA CACTTCCAAT CACTTGTATA	3060
ATATATATTA TATATCAGGC TGATAAAAT TATTTATAGG CAAAAAATC ACACGAGCTG	3120
TGTGATTCCA TTATTTGTCA AAATACTTTT TAGTTTCAGC AATAACGACT GGCACACAAGA	3180
CCAAGAGGGC AATCAAGTTT GGCAGAGCCA TCAAGGCGTT AACGATATCT GCGATAATCC	3240
AGACCATATC CAACTCGATA AATCCTCCTA ACAAGACCAT GAGCACAAAA ACCACACGGT	3300
AGAGCCAGAT AAAGCGAACC CCAAAGAGGA ACTCAAAACA GCGTTCTCCG TAATAGTTCC	3360
AACCTAGAAT CGTTGTAAAG GCAAAAAGTA CAAGGAAGAT GGTCAAGAGA GCAGGCCCAA	3420
AGTGTGAAAA GTTTGTTGAG AAAGCTGACT GAGTCAAGGC AACCCCATTC AAGTCACCGC	3480
TCCAACTCC AGTTACCAAG ATGGTCAAAC CAGTTAGAGT A	3521

(2) INFORMATION FOR SEQ ID NO: 119:

845

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 1968 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

AACCTGGGCA AGCAAGCTAA AAGCAATGGG ACCTGGAATC CTAATGGCAA CTGCCGCTGT	60
TGGAGGTTCC CACATTGTAT CCTCAACTCA AGCTGGCGGT TCTTACGGTT GGTCTCTACT	120
TCTCTTGGTC ATCTTAGCCA ATGTCTTTAA ATATCCATTT TTCCGTTTGT GTGCTGAATA	180
CACAGCTGAT ACTGGAAAGA CTTTGGTTGA AGGTTATGCC GAAAAAGGAA AACTCTATCT	240
CTGGATTTTC TTTATCCTCA ATGTCTTTTC GGCTATGGTC AACACGGCTG GTGTTGCCAT	300
TCTGTGCTCA GCTATCATCG CCAGTGCCTT CCCAATGATT GGACTTAGCA TTA CTCACTG	360
GTCCCTCATT CTCGTTGCAA TCATTTGGGC TATGCTACTC TTTGGAGGCT ACAAACTTTT	420
AGACGGCATG GTCAAATGGA TTATGTCTGC CTTAACCATT GCGACTGTTC TTGCACTTAT	480
CATTGCGGCG GTCAAGCATC CAGAATACAG TTCTGATTTT GTCGAGAAGA CACCTTGGCA	540
AATGGGAGCT CTGCCCTTCA TCGTCTCCCT CCTAGGATGG ATGCCGGCTC CTATTGAAAT	600
TTCAAGCATC AATTCACTTT GGTCAGCTGA AAAGAGAAAG ACCGTCAACT TTAACACAGA	660
AGACGCTCTG TTTGACTTTA ACACTGGTTA TATTGGAACA GCTATCCTAG CCGTCTTCTT	720
TGTGGCACTG GGAGCACTGA TTCAGTATCC TACAGGGCAG GCGGTTGAAG CTGCTTCAGC	780
CAAATACATC TCTCAATTCG TGGGCATGTA TGCCTCTGTT CTTGGCGAAT GGTCCTGTTA	840
CTTGATTACC TTTATTGCCT TCCTCTGTAT CTTTGGGAACA GTTATAACTG TTATCGATGG	900
CTATTCTCGC GTTAATCAGG AATCTCTCCG ACTGCTAATC AGTCAAAAAG AGGACAATCG	960
TAAATCTTTG AACATCTGGA TGACCATCAC TGCTATCATC GGTATCGTCA TTATCAAGTT	1020
CTTCGCTGGT CAGGTTTCAA CCATGCTCCG CTTTGCCATG ATTGGCTCTT TCCTGACAAC	1080
ACCTTTCTTT GCTCTTTTGA ATTACGCCTT GGTAACGCGT GAAAAACAAA ATCTTCCTTC	1140
TTGGCTCAAA CACCTTGCCA TTGCGGGATT GATTTTCCTC TTTGCTTCGC CATCTTCTTT	1200
ATCTACGCAC TCGCAATCGG AAAAGCAGGG TAAGGGACAA GCGCGAGATG AAGATAAGGT	1260
TTCAATTCAA GAGAAAATTC AGCAAATATT TCTATGATAA AAAGCATAAG AACAAGGTTT	1320
TGAAGACCTG AACTTATGCT TTTTACGTT CTAAAGACT GTTTATACTC AAAAAACAGT	1380
TGAACAACCT CAACCACCTC TTATAAGAAC TTTATACTAT TCGAGAATCT CTTCAAACCA	1440

846

CGTCAGCTCT ATCTGCAACC TCAAAGCTGT GCTTTGAGCA ACCTGCGACT AGCTTCCTAG	1500
TTTGCTCTTT GATTTTCATT GAGTATTAAT TCTCCTTTTC CAACTCATAA AAATCTGCGA	1560
TAATAGCTGC GACATGTTTG ATATCTTCCA GCATGCCTCG CATTTCAAAG TCAGCCAATA	1620
CAGGGAAGCC AAAGCGTTGA CTGTATTGCT TGGCTGTTAG GCAGTATTGG TTATTAAAGT	1680
TACGATTTC TGACCCAACC ACACCAAAC ACTTACTAGC ATTGTTACCA TAGGCAATAA	1740
AATCTCCAC CGGTGTCGTC AAAATCTCAA CATCTCCGTT ATCCACGCCA TTCCACCTT	1800
CGAGATAGGT CGGCAAAAAA GCGACATAGG GATGGTCCAT TTCATAGAAA TTTTGCCTT	1860
CCTTGACCAA ATCCTTGATA TGAATCTTTT GAACCTCAAT CCCTTTGTAC TGGGACAAGA	1920
GATAGTCTTT CAAGCGCGTC ACAAACCTTT CAGTGTGCC ACTCAAGG	1968

(2) INFORMATION FOR SEQ ID NO: 120:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 7172 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

CCGCATTTTT TATCACTAGA CTCGAGACAT CTTTGTAGTG GCTCTTGCTC TCTGGTTTAA	60
TTTTCTTCCT TGCTCAAGGA CTCCTGCTAT TTCTCTGGT CGTCCGACTC AAACATCAAT	120
TCGCTGAGAT TTATCCTCAA ATCAATAAAA AGATTGCTT CTAATATTTA GGGGTCTCTA	180
CCATTGATTT TCTATTTTTT GTTCTCTTAG CCTTCATTAG TTCTCAGCGT TTTTCATCTC	240
TTATGCCAAT CATCACTGCT TGCCATTCTA CTTTTTATTA TATGACAGCT GACTACCTAA	300
GAGAAACTA TCCAGACTTT TACGACAAAC ACATCTCTTT ATGGGAGTGT CTCTAAAGAA	360
AAGGAGGTTT TAGCATGAAA AAAATCATCT TCATCAAAAC CATTCAACTC CTTGTCATTG	420
ATGGAATCAT GCTGGCATTT TTGACATTTA AAAGGGGGCT TACTTGGGAC TGGATTTTGA	480
TTTATAGCGG TTGGCTCATT TTCTTTTCATC CTGTGCTATT GACCTATCTT TCAAACCAAC	540
TTTGTGACCA CTTTAGTTAA CTCTATTCCC AGATTAGACC GAGATTCTGG CGTTTGTCTT	600
TACAAATTCT CCTATGGGAT AGCCTGATGA TTCTCTCCTT GGTGTCTTTA AGTGATATTC	660
CACCTTTTCCT TCAGGGAAC CTCTCATCC TAGGACATCT CATCCCTTCC TATCGCATCT	720
GCCAAAGCCT GAAAGAGAC TTCCCCCAAG CATATCAAGA ACCGATTTCT TTTTGGAGTA	780
TTTTATGATA GATGAGAAAG ACCAAGCCGA CTGGGCTTGG TCTTTCTTAT CTCTTTTATG	840
TATCTAGGAT AATGGTAACA GGTCATTAT TAACCAGCTC AACCTGCATA TCTGCTCCAA	900

847

AGATGCCTGT CTGAACGGGC ACTTCTTGCG CTAATTTTGG ATTGAAAGCA TCATAGAAGT	960
CTGATGCCAT ATCAGGTTTA GCTGCCCCTG TAAAGGCTGG ACGATTGCCT CTCTTAGTAT	1020
CCGCAAAGAG GGTAACTGA GAAATAGAGA GGATTTCTCC TTCAATATCT TTGACAGACA	1080
GGTTCATCTT GCCTTCTGCG TCTGAAAAA TCCGCATATT GACCAGTTTT CTCACAGCAT	1140
AGTCCAAATC TTCCTCTTGG TCCTCTGGTC CAACACCAAC CAGCAATAAA AGTCCCTGAT	1200
TGATTTTTCCT CTGAATCTGG CCTTCTATAC TCACTTGGGC TTTTAAACC CGTTGGATAA	1260
TGATTTTCAT AATAGCCTTT CTAGTAAGAG CTAGGACAAC TAGCCGTTGG TCCGTTTGAC	1320
AGAGTAAACT TCTGGCACAC TCTTAATTTT ATCGACAACC GTGGTCAGTG TAGAGAGGTT	1380
GGCAATACCG AAGGACACAT GGATATTAGC AACTTCATA TCCTTG GTTG	1440
GACCGTTGAA ATATTCTTGG TTGTATTGA AAGAACTGCG AGTACATCGT TCAACAGTCC	1500
TGTACGGTTG AGACCGTAGA TATCGATATG GGCCATATAC TCCTTATTTG AGCTAGGGTA	1560
CTGGTCTTCC CATTCCACAT CAAGGAGACG TTGCTCGTAG TTTTCTTGGG CACGCAGGTT	1620
CATACAGTCC ACACGGTGAA TAGCCACACC ACGACCTTG GTAATGTAGC CAACAATATC	1680
GTCACCAGGC ACGGGGTAC AACACTTAGC AATCCGCACT AGGAGACCAG AAGCACCTTC	1740
AATAACCACT CCCCCCTCAT GCTTGACCTT GAGGGTTTCT TTATTTTCAA CCTTGACCTC	1800
GCCACCTTTG ACAAGCTCCT CTGCCTCAGC TTTGGCCTTG GCACGCTCTT CCTCACGGCG	1860
TTCCCTTTCA GTCAGACGGT TAAAGACGGT AATCGCACCG ATTTCCCCAA AACCAATGGC	1920
CGCAAAGAGG GAGTCTTCTG TCTTGTAAGT GGTCTTTTGC AGAACTTGAT CCATGTGGCG	1980
CTGTCCATA AATTTATTTG CCACATAGCC ATTTTCTTGG AACTGAGCCA TCAGCATCTC	2040
ACGACCCTTG TTGACAGACA ATTCCTTATC TTGGTTTTTA AAGAACTGGC GAATCTTATT	2100
GCGCGCCTTG CTAGTCTTGA CCATATTGAG CCAGTCACGG CTAGGTCCAA AGGAGTTCCG	2160
GTTGGCGATA ATTTCAACCT GATCCCCTGT CTTTAACTTG GTTGTGAGTG GAACCATGCG	2220
GCCATTGACC TTGGCACCAG TTGCTTTTTC ACCGACCTTG GTATGGATTT CGTAGGCAAA	2280
ATCAATCGGT CCTGAATCTT TGGGAAGGGA ACGGACAGCT CCATCTGGGG TAAAAACGTA	2340
AATCTCCTCA GCCAAATAGT TTTCTTAAC AGAGTCCACA AATTCCTTAG CATCATCAGC	2400
CTGGTCTTGG AGCTCCATCA TCTCCTTGAT CCAGTTCATT CCAATAGCTG ATTCCTTGCT	2460
GTTAACTTGC CCCTTTATAC CTTTCTTATA AGCCCACTGA GCCGCAACCC CGTACTCAGC	2520
CACCTCGTGC ATTTCTTGG TTCGAATCTG GAATTCATC GGCCCTTTTG GTCCATAAAC	2580
AGTCGTATGG ATAGACTGAT AACCATTGGC CTGCGGTTG GCGATATAGT CTTTGAAGCG	2640

848

ACCTGGCATC	GGTTTCCAAA	ATTCATGCAC	GTAACCAAGC	ATGGCATAAA	CATCACTTTG	2700
GGTATCTAAA	ATACAACGAA	TAGCAATCAG	ATCATAGATT	TCCTCAAACC	GT'TTCTCTT	2760
GTCCTGCATT	TTGCGGAAAA	TTGAGTAAAT	ATGCTTGGGA	CGACCATAAA	TCTTCCCTTT	2820
CAAGTGACGT	TCTGTCGTAT	ACTCCTCTAA	TTTGTGACT	ACCTCATCCA	CCAAGGCCTC	2880
ACGCTCCCTG	CGCTTTTCCT	TCATCATATG	GGTAATCTTG	TAAAACTCCG	TTGGATTGAG	2940
ATAACGGAAA	GACAAGTCTT	CTAATTCCCA	TTTGACACTG	GAAATCCCCA	AACGATGGGC	3000
AAGCGGGGCA	TAGATTTCCT	TGGTTCTTT	GGAATACGC	TCCTGCTTGT	CTTTTCGAAG	3060
ATGTTTCAGG	GTCCGCATAT	TGTGCAAGCG	GTCAGACAGT	TTGACCAAAA	TAACGCGGAT	3120
GTCCTCAGAC	ATGGCCATGA	GCATCTTGCG	ATGATTTTCC	GCTAATTGCT	CCTCGATCGA	3180
TTTGTACTCG	ACCTTGCCAA	GCTTGGTAAC	TCCGTCAACA	ATCATCCGCA	CATCAGGACC	3240
AAACTCTCTT	TCCAAATCGT	CCAAAGTCGC	ATCTGTATCT	TCCACCACAT	CATGCAAGAA	3300
TCCACAAGCT	ACTGTTACAG	CATCCAGCTT	TAGCTTAGCT	AAAATACCTG	CCACTTGGAT	3360
AGGGTGAATG	ATATAAGGCT	CGCCTGATTT	GCGATATTGA	CCACTGTGGC	ATTCAACAGC	3420
ATAGACCAAG	GCCTTATGGA	CAAAATGAAC	ATCCTCTTCC	GTTAAATATT	CTTTGGTTAA	3480
AGCGACAAC	TCTTCGCCTG	TTAAATTAC	TTCTTTGCGC	ATCTCTACTC	TCCAATTCTT	3540
CCTACCATT	TATCACTTTT	TTAAGAATAT	GAAAAC	TTGGAACAGA	ATAAGAAAAA	3600
AATAATTCAA	AATTGCTTGA	TAATTCTGAA	TTATTGGTCC	GTAATATACT	ACGAAGTTAG	3660
ATTTTAACT	TAGGTGATAG	AAGGAGAGAT	AGAAGAACGG	AAACCATATT	GTAACCCAAA	3720
GACTTTCTGA	CTTCCCAAT	TCCATTGAAG	ATACGAAAGA	TAAACGGTGG	AACTCGTATC	3780
ACATACACTG	GTACCTTGAC	TGGATTTTGG	AATTAATACT	AAATGAAAAT	CAAAGAGCAA	3840
ACTAGGAAAC	TAGCCGCAGG	TTACTCAAAG	CACCGCTTTG	AGGTTGCAGA	TAAAGTTGAC	3900
GCGGTTTGAA	GAGATTTTGG	AAGAGTATAA	AAATCCTCAA	GATACTTTCT	TCTATCCTTT	3960
AGTTTATAAG	GAGAATACCT	ATGAAAAAAA	CTGCTATTTT	TATCTTTGCT	CTCCTAATGT	4020
TAGGAGTTTG	CTGCCTGTTT	CTATTCAGCC	AGCAAAGCTA	TAAAAAACAG	TCGTTCAATA	4080
CTATGCTAAC	GACCAGAACC	TGCCCAGTAG	GATAACTTAT	AGTGAATATA	GCGACAAATG	4140
AGAAGCCAAC	TACGGTAGCA	CTCTAAACAT	CACGTCTATC	AAACAAGCTA	ATGACGGAGT	4200
TTATGCAACC	TATGAAGGGC	AATTGACACC	TTTCCAATAT	TGATAAATTG	ATAACGAGCC	4260
TGTCTTCATC	TAGTCATGCT	GGTTTTTAAG	TTCATTTTAA	ATCCTTACCT	ATTCTCCCTA	4320
ACTGTGCTAT	ACTTAATTTA	TACTCAATGA	AAATCAAAGA	GCAAAC	AAGCTAGCCG	4380
CAGGCTGTTC	AAAGCACTGC	TTTGAGGTTG	CAGATAAAGT	TGACGCGGTT	TGAAGAGATT	4440

849

TTCGAAGAGT	ATTAGTACAT	TCTTTGAGAT	TGGAGCTAGT	ATGAAAATCC	ATAAAACCGT	4500
GAATCCTGTT	GCCTATGAAA	ATACCTATTA	TCTAGAAGGC	GAAAAGCACC	TCATCGTCGT	4560
CGATCCTGGT	AGTCATTGGG	AAGCCATTTC	TCAGACAATC	GAGAAGATCA	ACAAACCGAT	4620
CTGTGCTATT	CTCTTGACCC	ACGCCCATTA	TGACCATATC	ATGAGTCTGG	ACTTGGTTTCG	4680
CGAGACGTTT	GGCAATCCTC	CTGTCTATAT	CGCAGAGAGC	GAAGCCAGCT	GGCTCTACAC	4740
TCCTGTCGAT	AATCTCTCCG	GTCTCCCTCG	CCACGATGAT	ATGGCAGATG	TGGTCACAAA	4800
ACCTGCAGAA	CACACCTTTG	TCTTTCACGA	AGAATACCAA	CTAGAGGAAT	TTCGTTTAA	4860
GGTTCACCG	ACCCAGGGC	ACTCTATCGG	TGGTGTTC	CTAGTCTTTC	CTGATGCTCA	4920
TCTAGTCTTG	ACGGGAGATG	CTCTATTCCG	CGAAACTATC	GGACGGACCG	ACCTTCCGAC	4980
TGGTAGCATG	GAGCAACTCC	TTCATAGTAT	CCAGACCCAA	CTCTTCACCC	TACCAAACTA	5040
CGATGTCTAT	CCAGGACATG	GTCCAGCTAC	TACTATCGCT	CACGAAAAGG	CCTTCAATCC	5100
CTTTTCTAG	CAAGATGATG	ACAATCGAAA	TTTAAGTAA	CTATCCAGCA	AATCTTTCTA	5160
TTACAAAAGG	CATCCTATCA	AGGTTTTCAC	ACATGATTGG	ATGCCTTTT	TCTGATGACT	5220
AGATTTTTTG	CATTACCAAA	TAATCACGCG	CTCCTCTGGT	GAACGCCACA	TTCCGTCTCC	5280
TTCTTTGACA	TCATAGGTTG	TAAAGAAATC	GTCGAAGTTT	GGTACTTGCA	CATTGACACG	5340
GAGTTTGGCT	GGTGCCTGCA	CATCGACGCT	AGCCAAAAGT	TTCATAAATT	CTGGTCGACC	5400
TTTCATGCGC	CAGATGCGAC	CGAAGTTGTA	GAAGAACTCT	TCTGCTGAGA	AGTCTGCTTC	5460
TCTCTAGCT	GCTTCAAGCG	CTGCTGCGAT	TCCTCCCAAG	TCAGCCACGT	TTTCTGATAC	5520
AGTCAATTTA	CCGTAAATGG	TTGCTCCATA	AGAATCCTGT	CCATCAAATT	GGTCAATGAC	5580
TTTTTGTGTT	TTCTCCTTGA	AGGCAGCATA	GTCGCTCTCT	GTCCACCAAT	CCTTGAGGCT	5640
ACCATTTTCG	TCAAAGGAAG	CCCCGTTAGT	ATCAAAGGCG	TGGGAAATTT	CATGGGCAAT	5700
CACTGCCCCA	ATACCACCGT	AGTTAGCAGA	AGATGACTGA	TGCAAGTCAT	AGAAAGGCGC	5760
CTGTAAAATG	GCCGCTGGAA	AGACAATCAG	GTCTTCTGA	GGATTGTAGT	AGGCATTGAC	5820
CATATGAGCA	GGCATGCCCC	ATTCTTTATA	ATCTACAGGC	TGGTTCCACT	TACTCCAACT	5880
GTGCTTGATT	TCCACACGCG	CAAAGGCTAG	AGCATTCTCA	AAAAGACTGG	CAGTTTCATT	5940
CACTACCTTA	TCCTTGTAAC	GTGCAGGCAA	TTCTTCTGGA	TAGCCAATAT	AAGGTTTGAT	6000
CACATTGAGC	TTCACGATAG	CCTGTTTACA	GGTTTCTGGA	GTGAGCCAGT	CATTCTTAAG	6060
CAGACGCTCC	TTATAAACAT	CAATCATGGT	TGCCACTTTT	TTCTCCACAT	CCGCCTTGGC	6120
TTCTGGAGAG	AACTTCTCAC	GGGCGTACCA	AAGACCCAGG	GCTTGCTTGA	AAGGTTCTTG	6180

850

TGCTAGATGA TAAGCTGCTT TGACCTTATC TTTTGCCTCT GGAAGTCCAG AAAGGGCACG	6240
GCTGTAGGCA CCAGACAAA CACGGATATC CTCTGTTAAA TAGCTGGTTG AAAGATTGAC	6300
AACACTCAA ATCAAGGTTG CTTTAAGGAG AGACCAGGCT TCCTCACTGT AGAATTGCTC	6360
TGCTGCTTGC CAGAAACGTT CCTCGTCTAC AATAACCTTG TCTGGTAATT GCCCAATAAC	6420
TGCTTTGAAG AAGTCATCCA AAGGTAGGCG AGGCGCGAAT TTCTTGAAAT CTTGTAAGA	6480
ATATGGATGA TAGAGTTTAG CATATTCTGA ACTTTCTTCA TTAGAGAGCA CCACTGCCGC	6540
AACTCGGCGG TCCAATTCAA GTCTTTTTC TAGCAAGTCT TCAATTTCTT CATCAGAGAA	6600
ATCATAAGCC TTGAGGAGAT TTGCGCTGCT TTCTTTCAA AGAGTCAAGA GCTCTTCGCG	6660
CTGAGGATGT TCTTCTGCAT AGTAGGTCGT ATCTGGCAAG ATTGTGCTTG GAGCGCTAGC	6720
CCATAGAACA TTGATTCTAG CATCCATAAA GTCTGGCGAT ACACCAAAAG GAAGGAAGTT	6780
TGGTTTTCCCT GCAAGCTCAA ACTCTGCTAG TTTAGCTGTA AAATCCGCAA AAGTCTCAA	6840
TTCTTGGAAT TCTTTAAGGA GTGGTAAGAC AGGTGTGATA CCGTCAGCTT CTCTCTTGTC	6900
AAAATCACGA ACTAGGCGGT GGTATTTGAC AAAGTTTTC AAGATAGCAT CCTCAGGCAC	6960
TTCTTCACCT GCTAACCCTT TGTCTGTTGT CGCCAGCATC AGGTCTTCAA TTTCTTGGTC	7020
TAAATCAACA AAACCTCCTG TTTGAGACTT ATCTGCTGGG ATTTAGCTG TCTGTTGCCA	7080
TTCTCCATTG ATAGCATCAT AAAAATCATC TTGATAACGT GTCATCTTGT TCTCGCTTTC	7140
ATTTGTATTT GCATTTATCT TAACAAAAAT CG	7172

(2) INFORMATION FOR SEQ ID NO: 121:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4518 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

CGGGAAGTTA TGCGATCTAG ACTTCGTTCC TGTACAGCTA CTTTCTCAGG TGGTCTTGTT	60
GTTTGTATGA GTTTGTTTAG AGAGGATCTT TCTATGTCTT TCTTTCTTAT TTTTGTTTTA	120
TATGCTTTTC TGATTCTTTA TCTAATTAT GGTATTTTCA GACTAAAAAG GAAATACCGA	180
GTAGATGAAT AGCAAGGTTT TAGGTCTTCA GATTGATTTT TAGCACTCTT GATAAAGAG	240
TGCTAATTTT TTGAGTTTTC GTCTTGACAT TCTCTTCTAA GGGTGTATAA TAGAATCATG	300
AGTTAGCACT TGGATGCATT GAGTGCTAAT TGATCAGACA GAGAGGAGTG ATGAGATGGT	360
TACAGAGCGT CAGCAGGATA TTTTAAATCT GATTATTGAC ATCTTTACCA AAACGCACGA	420

851

ACCTGTCGGA TCAAAAGCCT TGCAAGAGTC TATTAAGTCT AGCAGTGCAA CCATTTCGTAA	480
TGACATGGCG GAACTAGAAA AACAAAGGTT GCTTGAGAAG GCTCATACTT CAAGTGGTCG	540
GATGCCAAGT GTTGCTGGTT TTCAGTACTA TGTGAAACAC TCACTGGATT TTGACCGGCT	600
GGCTGAAAAT GAGGTATATG AGATTGTCAA AGCCTTTGAT CAGGAATTCT TCAAATTGGA	660
GGATATTCTG CAAGAGGCTG CTAAGTACTT AACAGACCTG AGTGGCTGTA CGGTAGTGGC	720
ACTGGATGTT GAGCCGAGCA GGCAACGTTT GACAGCCTTT GATATCGTTG TTTTGGGGCA	780
ACATACAGCC TTGGCGGTAT TTACCCTAGA CGAGTCGCGA ACGGTACTTA GTCAGTTTCT	840
GATTCCAAGG AACTTCTTGC AGGAGGATTT GCTGAAACTG AAGAGCATCA TTCAGGAACG	900
TTTCCTCGGT CACACCGTTT TAGATATTCA CTACAAGATT CGGACGGAGA TTCCGCAGAT	960
TATCCAGCGT TACTTTACAA CAACGGATAA TGTCATCGAT CTCTTTGAAC ACATCTTTAA	1020
GGAAATGTTT AACGAAAACA TTGTGATGGC GGGCAAGGTC CATCTCTTGA ATTTTGCCAA	1080
TCTAGCAGCC TATCAGTTCT TTGACCAACC GCAAAAGGTG GCCTTGAGGA TTCGTGAGGG	1140
GTTGCGTGAG GATCAGATGC AAAATGTTTCG TGTGTCAGAC GGTCAAGAGT CCTGTTTAGC	1200
TGACCTAGCG GTAATCAGTA GTAAGTTCCT CATTCCTTAT CGGGGAGTTG GAATTCCTAGC	1260
CATTATCGGT CCAGTTAATC TGGATTACCA ACAGCTAATC AATCAAGTCA ATGTGGTCAA	1320
CCGTGTTTTG ACCATGAAGT TGACAGATTT TTACCGCTAC CTCAGCAGTA ATCATTACGA	1380
AGTACATTAA GATTGAAATC ATTAAGGAG GCGAACATGG CCCAAGATAT AAAAAATGAA	1440
GAAGTAGAAG AAGTTCAAGA AGAGGAAGTT GTGAAAACAG CTGAAGAAAC AACTCCTGAA	1500
AAGTCTGAGT TGGACTTGGC AAATGAACGT GCAGATGAGT TCGAAAACAA ATATCTTCGC	1560
GTCATGCAG AAATGCAAAA TATCCAACGC CGTGCCAATG AAGAACGTCA AAAGTTGCAA	1620
CGTTATCGTA GCCAGGACTT GGCAAAAGCA ATCTTACCAT CTCTTGACAA CCTTGAGCGT	1680
GCACTTGACG TTGAAGGTTT GACAGATGAT GTGAAGAAGG GCTTGGGGAT GGTGCAAGAA	1740
AGCTTGATTC ACGCTTTGAA AGAAGAAGGA ATTGAAGAAA TCGCAGCAGA TGGCGAATTT	1800
GACCATAACT ACCATATGGC CATCCAAACT CTCCCAGCAG ACGATGAACA CCCAGTAGAT	1860
ACCATCGCTC AAGTCTTTCA AAAAGGCTAC AAAGTCCATG ACCGCATCCT ACGCCCAGCA	1920
ATGGTAGTGG TGTATAACTA AGATATAAAG CCCGTAAAAA GCTCGCAGTA AAAATAGGAG	1980
ATTGACGAAG TGTTCGATGA ACACAAGAAA ATCTATCTTT TTTACTCAGA GCTTAGGGCG	2040
TGTTTCGATTC GGCAATTCTG ACGGTAGCTA AAGCAACTCG TCAGAAAACG GCAATCGCTA	2100
TGGCGTTTGC CTAGCTTCCT TACTAACTCG TCGTCGAAAT AAAATCGATT TCGACTCCTC	2160

852

GTGTCGCAAT	TTACATAATA	GAAAACTTGT	CCGAAACGAC	AATAAACTAT	GAAGAAAGAT	2220
AAAATATGTT	TGGCTTTGTA	ATAGTGAGCG	AAGCGAACCA	AACACGATAC	TCTTCGCCGT	2280
GGCGCTATTT	GCGCAAATTT	TGAGACCTTA	GGCTCAAAGT	TTAGTCAAAG	AGATTGACGA	2340
AGTCAAGCTC	TGACGGCGTC	GCCACTGTCT	CCACTTAAGA	AGAGTATCAA	AAAGAAAAAT	2400
AGAAAAATTA	CTAACAAGGA	GAAAAACACA	TGTCTAAAAT	TATCGGTATT	GACTTAGGTA	2460
CAACAACTC	AGCAGTTGCA	GTTCTTGAAG	GAAGTAAAG	CAAAATCATC	GCAAAACCAG	2520
AAGGAAACCG	CACAACTCCA	TCTGTAGTCT	CATTCAAAAA	CGGAGAAATC	ATCGTTGGTG	2580
ATGCTGCAAA	ACGTCAAGCA	GTTACAAACC	CAGATACAGT	TATCTCTATC	AAATCTAAGA	2640
TGGGAAC TTC	TGAAAAAGTT	TCTGCAAATG	GAAAAGAATA	CACTCCACAA	GAAATCTCAG	2700
CTATGATCCT	TCAATACTTG	AAAGGCTACG	CTGAAGACTA	CCTTGGTGAG	AAAGTAACCA	2760
AAGCTGTTAT	CACAGTTCCG	GCTTACTTCA	ACGACGCTCA	ACGTCAAGCA	ACAAAAGACG	2820
CTGGTAAAT	TGCTGGTCTT	GAAGTAGAAC	GTATTGTTAA	CGAACCAACT	GCAGCAGCTC	2880
TTGCTTATGG	TTTGGACAAG	ACTGACAAAG	AAGAAAAAAT	CTTGGTATTT	GACCTTGGTG	2940
GTGGTACATT	CGACGTCTCT	ATCCTTGAAT	TGGGTGACGG	TGCTTTCGAC	GTATTGTCAA	3000
CTGCAGGGGA	CAACAAACTT	GGTGGTGACG	ACTTTGACCA	AAAAATCATT	GACCACTTGG	3060
TAGCAGAATT	CAAGAAAGAA	AACGGTATCG	ACTTGTCTAC	TGACAAGATG	GCAATGCAAC	3120
GTTTGAAAGA	TGCGGCTGAA	AAAGCGAAGA	AAGACCTTTC	TGGTGTAAT	TCAACACAAA	3180
TCAGCTTGCC	ATTTATCACT	GCAGGTGAGG	CTGGACCTCT	TCACTTGGA	ATGACTTTGA	3240
CTCGTGCGAA	ATTTGACGAT	TTGACTCGTG	ACCTTGTTGA	ACGTACAAAA	GTTCCAGTTC	3300
GTCAAGCCCT	TTCAGATGCA	GGTTTGAGCT	TGTCAGAAAT	CGACGAAGTT	ATCCTTGTGT	3360
GTGGTTCAAC	TCGTATCCCT	GCCGTTGTTG	AAGCTGTTAA	AGCTGAAACT	GGTAAAGAAC	3420
CAAAACAAATC	AGTAAACCCT	GATGAAGTAG	TTGCTATGGG	TGCGGCTATC	CAAGGTGGTG	3480
TGATTACTGG	TGATGTCAAG	GACGTTGTCC	TTCTTGATGT	AACGCCATTG	TCACTTGGTA	3540
TCGAAACAAT	GGGTGGAGTA	TTTACAAAAC	TTATCGATCG	CAACACTACA	ATCCCAACAT	3600
CTAAATCACA	AGTCTTCTCA	ACAGCAGCAG	ACAACCAACC	AGCCGTTGAT	ATCCACGTTT	3660
TTCAAGGTGA	ACGCCCAATG	GCAGCAGATA	ACAAGACTCT	TGGACGCTTC	CAATTGACTG	3720
ATATCCCAGC	TGCACCTCGT	GGAATTCCTC	AAATCGAAGT	AACATTTGAC	ATCGACAAGA	3780
ACGGTATCGT	GTCTGTTAAG	GCCAAAGACC	TTGGAAGTCA	AAAAGAACAA	ACTATTGTCA	3840
TCCAATCGAA	CTCAGGTTTG	ACTGACGAAG	AAATCGACCG	CATGATGAAA	GATGCAGAAG	3900
CAAACGCTGA	AGCCGATAAG	AAACGTAAAG	AAGAAGTAGA	CCTTCGTAAT	GAAGTAGACC	3960

853

AAGCAATCTT TGCGACTGAA AAGACAATCA AGGAAACTGA AGGTAAAGGC TTCGACGCAG	4020
AACGTGACGC TGCCCAAGCT GCCCTTGATG ACCTTAAGAA AGCTCAAGAA GACAACAACT	4080
TGGACGACAT GAAAACAAA CTTGAAGCAT TGAACGAAAA AGCTCAAGGA CTTGCTGTTA	4140
AACTCTACGA ACAAGCCGCA GCAGCGCAAC AAGCTCAAGA AGGAGCAGAA GGCGCACAAG	4200
CAACAGGGAA CGCAGGCGAT GACGTCGTAG ACGGAGAGTT TACGGAAGAA TAAGATGAGT	4260
GTATTGGATG AAGAGTATCT AAAAAATACA CGAAAAGTTT ATAATGATTT TTGTAATCAA	4320
GCTGATAACT ATAGAACATC AAAAGATTTT ATTGATAATA TTCCAATAGA ATATTTAGCT	4380
AGATATAGAG AATTATATTA GCTGAACATG ATAGTTGTAT CAAAAATGAT GAAGCGGTAA	4440
GGAATTTTGT TACCTCAGTA TTGTTGTCTG CATTTGTATC GGCGATGGTA CCGTATCTGA	4500
CGAACGTTCA GCTTATAT	4518

(2) INFORMATION FOR SEQ ID NO: 122:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8145 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

TGCTATTTTC GATTCCCTTG GCGTTTTGA TTGCCTTTGC CTTGCAAGTC CATTGGAAGC	60
CCCTCCATTA TCTGATTAAC ATTTACATCT GGGTTATGCG AGGAACCCCC TTA CTCTTG C	120
AACTGATTTT TATCTATTAT GTGCTCCCAA GTATTGGGAT TCGTTTAGAC CGCCTTCCTG	180
CAGCTATTAT TGCTTTGTT CTCAACTATG CAGCTTACTT TGCAGAAATT TTCCGTGGGG	240
GAATTGACAC TATTCCAAGA GGACAGTATG AGGCCGCCAA GGTCTTGAAG TTAGCCCTT	300
TTGACAGAGT GCGCTATATT ATCTTGCCCC AAGTGACCAA GATCGTTCTT CCTAGTGTCT	360
TTAATGAAGT TATGAGTTTG GTCAAGGATA CTCTTTGGT CTATGCTCTC GGAATTCAG	420
ACCTTATCTT GGCTAGTCGA ACAGCTGCTA ACCGCGATGC TAGTCTAGTT CCTATGTTCT	480
TGGCAGGAGC CATTTATTTG ATTTTGATTG GGATTGTGAC AATTATTTCC AAAAAAGTTG	540
AGAAGAAGTA TAGTTATTAT AGATAGGAGG CTGCCATGTT AGAATTACGA AATATCAATA	600
AAGTCTTTGG AGACAAACAA ATCCTGTCTA ATTCAGTCT AAGTATTCCT GAAAAGCAAA	660
TCCTGGCTAT CGTTGGACCT TCTGGTGGAG GTAAGACAAC TCTTTTACGT ATGCTTGCAG	720
GTCTTGAAC CATTGATTCA GGGCAAATCT TTTATAATGG ACAACCTTTA GAGCTGGATG	780

854

AATTGCAGAA GCGCAATCTA CTGGGATTGG TCTTCCAAGA TTTTCAACTA TTTCTCATC	840
TATCAGTTCT GGAAAATTTG ACTTTATCGC CTGTGAAGAC CATGGGAATG AAGCAGGAAG	900
AGGCTGAGAA GAAGGCGAGT GGACTCTTGG AACAGTTAGG ACTAGGAGGA CACGCAGAGG	960
CCTATCCTTT CTCACTATCT GGTGGGCAAA AGCAGCGGGT GGCTTTGGCG CGTGCTATGA	1020
TGATTGACCC AGAAATCATT GGCTACGATG AACCAACTTC TGCCCTGGAT CCAGAATTAC	1080
GTTTGGAAGT GGAGAAGCTA ATCTTGCAAA ATAGGGAAGT TGGGATGACC CAGATTGTGG	1140
TTACCCATGA TTTGCAGTTT GCTGAAAATA TCGCAGATGT ATTATTGAAA GTAGAACCTA	1200
AATAGGAGGA AAAATGGATG AAAAAATGGA TGCTTGTATT AGTCAGTCTG ATGACTGCTT	1260
TGTTCTTAGT AGCTTGTGGG AAAAAATCTA GCGAAACTAG TGGAGATAAT TGGTCAAAGT	1320
ACCAGTCTAA CAAGTCTATT ACTATTGGAT TTGATAGTAC TTTTGTTCCTA ATGGGATTTG	1380
CTCAGAAAGA TGGTTCTTAT GCAGGATTTG ATATTGATTT AGCTACAGCT GTTTTGTAAA	1440
AATACGGAAT CACGGTAAAT TGGCAACCGA TTGATTGGGA TTTGAAAGAA GCTGAATTGA	1500
CAAAAGGAAC GATTGATCTG ATTTGGAATG GCTATTCCGC TACAGACGAA CGCCGTGAAA	1560
AGGTGGCTTT CAGTAACCTA TATATGAAGA ATGAGCAGGT ATTGGTTACG AAGAAATCAT	1620
CTGGTATCAC GACTGCAAAG GATATGACTG GAAAGACATT AGGAGCTCAA GCTGGTTTAT	1680
CTGGTTATGC GGACTTTGAA GCAAAATCCAG AAATTTTGAA GAATATTGTC GCTAATAAGG	1740
AAGCGAATCA ATACCAAACC TTTAATGAAG CCTTGATTGA TTTGAAAAAC GATCGAATTG	1800
ATGGTCTATT GATTGACCGT GTCTATGCAA ACTATTATTT AGAAGCAGAA GGTGTTTAA	1860
ACGATTATAA TGTCTTTACA GTTGGACTAG AAACAGAAGC TTTTGCGGTT GGAGCCCGTA	1920
AGGAAGATAC AAAGTGGTT AAGAAGATAA ATGAAGCTTT TTCTAGTCTT TACAAGGACG	1980
GCAAGTTCCA AGAAATCAGC CAAAAATGGT TTGGAGAAGA TGTAGCAACC AAAGAAGTAA	2040
AAGAAGGACA GTAAGATAAA ATAGTGGCTG AAAGTGCCTT TTGATTAGCA AAACGTAGTT	2100
TTTTTTGTAA TCTAGGAAAA CGATAATAGC GATTGAATAT GGATAATTGA ATATGGAATA	2160
GCCCACTGTG ATTTCTAAAA CATTTGTTAA AATTGATTGG ACTTCCAAAA TTAAATGTT	2220
CTGTAATGAA ATACTGATGT AACTGTTTTA GGAACAATAA AACGCATAAT ATCAAGGTTT	2280
TTGCACCTTA CATATGCGT TTTTGTGATT TTAAGACTTG TTAGCTGATT TTTTACAATC	2340
CTGCGAAATC TTTGATTCTT TGTGCTGACA TTGAAGAGTC GCAACGGACG TTGATTGTGC	2400
CATCTGTAAT ATGAACAAAA CCTGGTACAG TTGGGATFCC ATAGCGTGAG CGGAATGCTT	2460
GCAAATCATT GAGTTGGCTT GGTCTTTCAC TATTGATGAA GTAAATGTGA GCTTTGGTTT	2520
CAGCTACGAC ACCTGACAAT GTACCTGCAA ATTTACGGCA GTAAGGGCAA GTTTTGGCAG	2580

855

CGATAAAGAA GGTTCAGTT TCTTTTAT CAAGAGCTTC TTGCGCACGC ACAACTGTAG	2640
TGACTTCAAG GTCTTTGATG TTATCTAAAA ATTGTTCCAT GAGATTACCT CGCTTTCATT	2700
GATAAGTCTA GTATGCCATA AAGTTTCTAA AATTGCTTAG ATTTGATACG AAAAAAGATG	2760
AGGTTGGTTG GTCTCATCTT TTATAGGTCT TTATTTTACA AATGCATTGA TTTCTGCTTC	2820
GATGTTAGCA ATCTTAGCTT GTGATCTTC GTTGGTTCC CCTACAACTG CAATGTAGAA	2880
CTTGATTTT GGTCTGTAC CTGAAGGGCG AACGGCAATC CATGAACCGT CAGCAAGTGT	2940
GTATTTCAAC ACATCACTTG GAGGAGTTGT CAAGTTTGTA ACAGTACCGT CAGCAACAGT	3000
AGCAGTTTGT GCCTTGAAGT CTTCTACGAC AGTGATAGCT GTTGCCTTCC ATTCTGTTGG	3060
AGCATTTGTT CGGAATTTAG CCATAATCGC TTTGATTTGT TCAGCACCAT CGACACCTGA	3120
AAGAGTAACA GAGATTGTTT TTTCTGCGTA GTAGCCATAT TCTTTATAGA TTTCTTCGAT	3180
ACCGTCAGCA AGTGTCAAAC CACGAGAAGC GTAGTAGGCA GCAAGTTCAG CAACTACAAG	3240
AACGGCTTGG ATGGCATCTT TATCACGTAC AAATGGTTTA ATCAAGTAAC CGAAGCTTTC	3300
TTCAAATCCC ATCATGTAAG TGTGGTTGTG TTTTCTTCG AATTCTTGGA TTTTTCAGC	3360
GATAAATTTG AAACCTGTCA AGACGTTGAA CATAGTTGCG CCGTAGCTTT CAGCAATCTT	3420
CGTTACCAAG TCAGTTGAAA CGATAGATTT GCAGAGAGCG GCATTTTCAG GAAGAGTTCC	3480
AGCGTTTTTG TGAGCTTCCA AGATGTATTT AGCCATGATA GCACCGATTT GGTACCTGA	3540
AAGGTTGAGG TAGCTACCAT CTTTPTGAAG AACTTCAACA CCAACACGGT CAGCGTCTGG	3600
GTCAGTTGCG ACAAGAACAT CTGCACCAAC TTGACGACCA AGTTCTTCAG CAAGGGCAAA	3660
GGCTGCTTGG CTTCTGGGT TTGGAGATGT TACAGTTGAA AAGTCTGGGT CAGCAGTTGC	3720
TTGCGCTTCA ACAACTTGAA CAGAGTCAA TCCTGCTTGG GCAAGAGCAC GACGAGCCAA	3780
CATTTACCA GTACCATGAA GTGGTGTGTA GACAATCTTC ATGTCTTTAC CAAATCTTC	3840
AATCAAGGCT GGGTTGATGT TTATGTCCTT AACCTCTTTA AGGTATTCTA TGTCAACAGC	3900
TTGCGCGATA ACTTCAATCA AGCCAGAAGC TTTTTCAGTT TCCACATCAG CAACTTCAAC	3960
TGCAAATGGG TTTTCGATTG CACGGATATA AGTAGTCAA GCGTCCGCAT CGTGTGAGG	4020
CATTGTGCCA CCGTCTTCAC CGTAAACCTT GTAACCGTTA AATGGAGCAG GGTGTGGCT	4080
GGCTGTGACC ATGATACCTG CGAAACAGTT GAGATGACGA ACTGCAAATG ATAGTTCTGG	4140
AGTCGGACGA AGGCTTTCAA ATACGTAAGA TTTGATGCCG TGTTTAGCAA GAACTGCCGC	4200
AGATTCAAAG GCAAACCTCAG GTGAGAAGTG ACGGCTATCG TAGGCAATTG CTACACCGCG	4260
TTCTTTCTCG TTTCCACCTT TTGACTCAAT CAAACGAGCC AATCCTTCAG TAGCTTGGCG	4320

856

AACAACGTAG	ATGTTGATAC	GGTTTGATACC	AGCACCAACC	AAGCCACGCA	TACCTGCAGT	4380
ACCAAATTCA	AGATTTGTAT	AGAAGGCATC	TTCTTAGT	TTTTCGTCCA	TATTTTCCAA	4440
ATCTTGACGA	AGGTAGTCAC	GAAGCTCCAC	AAAATCAACC	CATTTCTGGT	AATTTTCTTG	4500
GTAAGACATT	CAAATCTCTC	TTATTTT	AAACATTAA	TCAGTTAAT	TATATCATTT	4560
TTTTTAGTTT	TAGTAAACC	TTATCTGCTT	CGAACATCTC	TTCAAACCAG	GTGAGATTGA	4620
ATTTTGGGGT	TATATGATGT	TGAGGCTAGG	AAAAATTCAA	TTTCAGTAAA	AAAAGTAAGT	4680
CTTCTCATAA	CAAAACATG	ATATAGTTAC	TTAGTTTAA	ACAAGCATAT	TATAATAAAG	4740
CTATGGCATA	TAGTACTGAT	TTTAAACAGC	GAGCATTAGA	TTACATCAA	GAGGGGCACA	4800
GCCATGTCGA	GGCAGCCAAG	TTTTTTGGTG	TTGGCGTCAG	AACTCTCTC	ACGTGGGAAA	4860
AGAAAGACGT	GAACAAGAAC	ACATAGAGAG	GAAAAAGCGA	GTCGTCAAAA	ACCGAAAGAT	4920
TCCTTTAGAG	GAATTGAAAG	CCTTTGTAGA	GGCTCATCCA	GATGCTTTT	TACGGGAAAT	4980
TGCGGCACAT	TTTGATTGTG	CTGTTCTTTC	AGTATGGGCA	GCTTTAAAGC	AGATTAAGGT	5040
CACTTTAAAA	AAAGATGACG	AGCTTTAAGG	AACAAGACCC	AGAAAAGTAG	CCTTATTCT	5100
TAAGAATTTT	AATAGTTTAA	AGCACCTAGC	ACCTGTTTAT	ATTGATGAAA	CAGGAATCGA	5160
CCGCTATCTC	TATCGTCCTT	ATGCAGGGGC	TCCTAGAGGG	GAGAAAGTCT	ATGAAAAGAT	5220
TAGCGGACGT	CGTTTTGAGC	GAACCTCAAT	TGTTGCAGGA	CAAGTAGACG	GAGAGTTTAT	5280
AGCTCCCATG	ATTTACAAGA	AAAGCATGAC	AAGCGATTTT	TTTGTGGAGT	GGTTCAAAAC	5340
GCAACTCCTA	CCTGCTTTGA	AGACACCTCA	TGTTATTGTC	ATGGCAATG	CTGGTTTCA	5400
TCCCAAGAAC	ATTTTGGATG	AACTCTGCAT	CCAAGATAAA	CACTTTTCT	TACCTCTACC	5460
ACCTTATTCA	CCGGATTGGA	ATCCTATTGA	GCAAGCTTGG	GCTATCTTGA	AAAAGAAAGT	5520
GACGGATGTA	TTAAGGGAAG	TTCCAACAT	TTTTGAATGT	TTGGAATGCT	TTTTTAAAC	5580
TAGATGACTA	TAACGGTTCT	AAAGGAACCT	ATCGAGTAGT	CATTAAACT	AAGGATACTG	5640
CTGGTTAAGA	GAAGACGGTA	TACAATCAA	CCATTACCG	TGTAGCCGAA	ATCGTTCAGA	5700
ATGAAGACTT	GTATCAGAAT	GAAGACTTGT	ATAAGAAAGG	TTTGAATGTT	GAACCTGCGC	5760
ACCAACAAAT	TAAGGGATTT	TTTGAAGCAG	AGTTTAAAA	TCGTATTAAT	GGAGTTCTTA	5820
ATACTAAAA	AAAAAATAGT	ACATTAAATC	GTGTAAATAA	AAAACTATA	CACCAGAGCA	5880
ACAAAACTC	CATGATCAAT	TTGAAGCAGA	AGCAACGGAA	GATGCTAAAA	AACAAGCGCA	5940
TATTGTGTTG	AATGTTGACC	AGGATTTTAT	GAGCATATCT	AAGTCTAATA	AAAGTGGTTC	6000
AGACTGGAAG	AAAACCTTCA	CAGTGAGGAT	AACCAATAGG	CTAGCAAATG	ACTTGAATAA	6060
TGTCTTGAAA	CAGGTTGATA	AAGATACTCC	TAATACCCCA	ACTTGGCTAA	ACTCAGCTGC	6120

857

TTCTAAAGCT AAAGATGATG ACAGAGTATA TAACTACTG AAGACTCTTA TACCAGGAGA	6180
AAATTACCTA TCATGTTAAG GATAATCAGC TAGAAGTAGA AACAGATAAA TACACATATA	6240
CTGCCGCTAG AAATGGTAGT AAGGAAGTTG GTATTCAAGA GTCAGATATA GCAGCAACTC	6300
TAAGTGCCGA TGAATATAAT TCTAATCGCC AAACCTTTGA GAGAGAATAC AAATACAAAA	6360
GCAATGCCC TTAATAATGG TTGGGCTAGA TCTGGTTCTG AAGAGTTCAA AAAGTTCTCC	6420
CACCTTGTAG GGGTAGACAA AGGGATTGTG CGAACGAATG TACTGACTGG TAAAAACTA	6480
TCTGATAAGA TTAGGAAAGA AGTGGGCTCT GGAGATAGCA AACTAGGAAA AGGCGGCTAT	6540
TTCTCTACTG GGGATGTTCT ATTAGGAAAA GATGTTGTTT CTTATACCGT ACAAGTATTT	6600
TCAGAGAATA ATGAAAGAGT AGGAGTAAAC ACTCAAAGTC ACCGTGTTCA GTATAATCTC	6660
CCAATTCTAG CTGACTTTTC AGTCATCCAA GATACTGTGG AACCATCACG AACCGTTGTT	6720
GAAAAATCA TTCCAAACT AAATATTCCC GAAGAAGAGA AAGGGAAAT AACCGAAGAA	6780
ATCAAGAAAA AGAAAAAAC CTCAGAATTG GCAGAACTAA TCTCAGAAAA TGTGAAAGTT	6840
CGCTATGTTG ATGAACAAGG GCGTTTGCTA TCATTGAAAA ATGATACTGG AATTGGAGAA	6900
AAAGAAAGTG ACGGAACCTA CATTACCAAT AAAAAACAAC TGATTGGTAC CAGCTATAAT	6960
GTCACAGATA AAAAECTCAG TAGCATGACT ACTACTGACG GAAAATATTA TACTTTTAAA	7020
GAAGCAGATA CAAATTCTGC AAGTTTAACT GGGAATATTG TAAGCGAAGG TAGAACAGTG	7080
ACCTTAGTTT ATAGAGAAAG CGAAGCGCCA ACCACTGCTA CAGTAACAGC CAATTACTAT	7140
AAAGAAGGTA GGCAAGAGAA GTTGGTAGAG TCTGTTATAA AAGCTGATTT AGCGATAGGT	7200
TCTGAGTATA CCACAGAATC AAAAECTATT GAAGGGAAAA CAACAACTGA GGACAAAGAA	7260
GACCGAGTTA TCACAAGGAA AACACATAC ACCTTGCTAG CAACTCCTGA AAATGCGTAC	7320
CAGAAGACGG TGCAACAGTT GACTATTACT ACCGTGAGAA TGTGAGGAA ACAGTGGTTC	7380
CCAAAACAGC AACCTCTACT GAGACGAAGA CTATAACGCG TATCATTCAT TACGTTGATA	7440
AAGTTACGAA CCAAAATGTA AAAGAAGATG TTGTTCAACC TGTAACCTTA AGCCGTACAA	7500
AAACTGAGAA CAAGGTCACG GGAGTTGTAA CCTACGGTGA ATGGACAACA GGAACTGGG	7560
ACGAGGTTAT ATCTGGTAAG ATTGACAAGT ACAAAGATCC AGATATTCCA ACAGTTGAA	7620
CACAAGAAGT TACGTCAGAC TCTAGTGATA AAGAAATAAC GGTAAGGTAT GACCGTTTAT	7680
CAACACCAGA AAAACCAATC CCACAACCAA ATCCAGAGCA TCCAAGTGTT CCGACACCAA	7740
ACCCAGAACT ACCAATCAA GAGACTCCAA CACCAGATAA ACCAACTCCA GAACCAGGTA	7800
CTCCAAAAAC TGAAACTCCA GTGAATCCAG ACCCAGAAGT TCCGACTTAT GAGACAGGTA	7860

858

AGAGAGAGGA ATTGCCAAAC ACAGGTACAG ³ AAGCTAATGC TACCTTGGCT AGTGCTGGTA	7920
TCATGACCTT GTTAGCTGGT CTAGGATTAG GATTTTTCAA GAAAAAAGAA GATGAAAAAT	7980
AATAGATTTT AGAATCTAGG AACCAGGAAA AGCTCACAGA TGTGGGCTTT TTTCCTGGTT	8040
TTGAGAACGA GGTCTTTCGT AAAGAATAAA AACGCTTACA AGTCTGTTGA ACTGGGAAAC	8100
TATGAATCCT ATTTTTTTAA AAATATTTCC AGAAATCAGT TGC GG	8145

(2) INFORMATION FOR SEQ ID NO: 123:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 8697 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

CGGTACCGGG AACGATACTT AGTCTAATTT TGCACCTTTT CCATGTATGG TAAAGGTTTT	60
TCTTTTTTTA AAAAGGAAAA CGAGAAGAGG AGGTTCTTAT GAAAGCAAGC ATTGCCTTGC	120
AAGTTTACC CTTAGTACAG GGGATTGATC GGATAGCTGT TATTGATCAG GTCATTGCTT	180
ATCTGCAWAC TCAAGAAGTG ACGATGGTAG TGACACCATT TGAAACGGTC TTGGAAGGGG	240
AGTTTGATGA GCTTATGCGC ATTCTAAAAG AAGCGCTGGA AGTGGCAGGG CAGGAGGCAG	300
ACAATGTCTT TGCCAATGTC AAAATAAATG TAGGAGAGAT TTAAAGTATT GATGAGAAAC	360
TTGAGAAGTA TACTGAGACG ACACATTAGT CTATTGGGCT TTCTCGGAGT ATTGTCAATC	420
TGGCAGTTAG CAGGTTTCTC TAAACTTCTC CCCAAGTTA TCCTGCCGAC ACCTCTTGAA	480
ATTCTCCAGC CCTTTGTTCTG TGACAGAGAA TTTCTCTGGC ACCATAGCTG GGCGACCTTG	540
AGAGTGGCTT TACTGGGGCT GATTTTGGGA GTTTTGATTG CCTGTCTTAT GGCTGTGCTC	600
ATGGATAGTT TGACTTGGCT CAATGACCTG ATTTACCTA TGATGGTGGT CATTGAGACC	660
ATTCCGACCA TTGCCATAGC TCCTATCCTG GTCTGTGGC TAGGTTATGG GATTTTGCCC	720
AAGATTGTCT TGATTATCTT AACGACAACC TTTCCCATCA TCGTTAGTAT TTTGGACGGT	780
TTTAGGCATT GCGACAAGGA TATGCTGACC TTGTTTAGTC TGATGCGGGC CAAGCCTTGG	840
CAAAATCCTGT GGCATTTTAA AATCCCAGTT AGCCTGCCTT ACTTTTATGC AGGTCTGAGG	900
GTCAGTGTCT CCTACGCCTT TATCACAAC GTGGTATCTG AGTGGTTGGG AGGTTTGTAA	960
GGTCTTGGTG TTTATATGAT TCAGTCTAAA AAAGTGTTC AGTATGATAC CATGTTTGCC	1020
ATTATTATTC TGGTGTGAT TATCAGTCTT TTGGGTATGA AGCTGGTCTGA TATCAGTGAA	1080
AAATATGTGA TTAAATGGAA ACGTTCGTAG AATTAGAAATG TTTCTGAAAA AGAAAAGAGG	1140

859

AAATCAAAAT GAAGAAAACA TGGAAAGTGT TTTTAACGCT TGTAACAGCT CTTGTAGCTG	1200
TTGTGCTTGT GGCCTGTGGT CAAGGAACTG CTTCTAAAGA CAACAAAGAG GCAGAACTTA	1260
AGAAGGTTGA CTTTATCCTA GACTGGACAC CAAATACCAA CCACACAGGG CTTTATGTTG	1320
CCAAGGAAAA AGGTTATTTC AAAGAAGCTG GAGTGGATGT TGATTTGAAA TTGCCACCAG	1380
AAGAAAGTTC TTCTGACTTG GTTATCAACG GAAAGGCACC ATTTGCAGTG TATTTCCAAG	1440
ACTACATGGC TAAGAAATTG GAAAAAGGAG CAGGAATCAC TGCCGTTGCA GCTATTGTTG	1500
AACACAATAC ATCAGGAATC ATCTCTCGTA AATCTGATAA TGTAAGCAGT CCAAAGACT	1560
TGGTTGGTAA GAAATATGGG ACATGGAATG ACCCAACTGA ACTTGCTATG TTGAAAACCT	1620
TGGTAGAATC TCAAGGTGGA GACTTTGAGA AGGTTGAAAA AGTACCAAAT AACGACTCAA	1680
ACTCAATCAC ACCGATTGCC AATGGCGTCT TTGATACTGC TTGGATTAC TACGGTTGGG	1740
ATGGTATCCT TGCTAAATCT CAAGGTGTAG ATGCTAACTT CATGTACTTG AAAGACTATG	1800
TCAAGGAGTT TGACTIONAT TCACCAGTTA TCATCGCAAA CAACGACTAT CTGAAAGATA	1860
ACAAAGAAGA AGCTCGCAAA GTCATCCAAG CCATCAAAAA AGGCTACCAA TATGCCATGG	1920
AACATCCAGA AGAAGCTGCA GATATTCTCA TCAAGAATGC ACCTGAACTC AAGGAAAAAC	1980
GTGACTTTGT CATCGAATCT CAAAAATACT TGTCAAAAGA ATACGCAAGC GACAAGGAAA	2040
AATGGGGTCA ATTTGACGCA GCTCGCTGGA ATGCTTTCTA CAAATGGGAT AAAGAAAATG	2100
GTATCCTTAA AGAAGACTTG ACAGACAAAG GCTTCACCAA CGAATTTGTG AAATAATGAC	2160
AGAAATTAGA CTAGAGCAGC TCAGTTATGC CTATGGTCAG GAGAGGATTT TAGAGGATAT	2220
CAACCTACAG GTGACTTCAG GCGAAGTGGT TTCCATCCTA GGCCCAAGTG GTGTTGGAAA	2280
GACCACCCTC TTTAATCTAA TCGCTGGGAT TTTAGAAGTT CAGTCAGGGA GAATTGTCCT	2340
TGATGGTGAA GAAAATCCCA AGGGGCGCGT GAGTTATATG TTGCAAAAGG ATCTGCTCTT	2400
GGAGCACAAG ACGGTGCTTG GAAATATCAT TCTGCCCTC TTGATTCAAA AGGTGGATAA	2460
GGCAGAAGCT ATTTCCCGAG CGGATAAAAT TCTTGCGACC TTCCAGCTGA CAGCTGTAAG	2520
AGACAAGTAT CCTCATGAAC TTAGCGGTGG GATGCGCCAG CGTGTAGCCT TACTCCGGAC	2580
CTACCTTTTT GGCACAAAGC TCTTCTCTT AGATGAGGCC TTTAGCGCCT TGATGAGAT	2640
GACAAAGATG GAACTCCACG CTGGTATCT TGAGATTAC AAGCAGTTGC AGCTAACAAAC	2700
CCTGATCATC ACGCATAGTA TTGAGGAGGC CCTCAATCTC AGCGACCGTA TCTATATCTT	2760
GAAAAATCGC CCTGGGCAGA TTGTTTCAGA AATTAACTA GATTGGTCTG AAGATGAGGA	2820
CAAGGAAGTC CAAAAGATTG CCTACAAACG TCAAATTTG GCGGAATTAG GCTTAGATAA	2880

860

GTAGAAAAAT AGGGAGTTGG TGAAGATTAT CCTTTACCAG CGCCCTTTT CTTTAAAAA	2940
TGAGAAAAAT TCGGTATAAT AGTCAAACAA GGTCAAGGTT TAAAGAGAGA GGTGGGTTTG	3000
TTATGAGATT TAAAAATACA TCGGATCATA TTGAGGCCTA CATCAAGGCG ATTTTAGATC	3060
AATCTGGTAT CGTGGAGTTG CAACGGAGTC AGTTGGCAGA TACCTTTCAG GTTGTTCTTA	3120
GTCAGATTAA CTACGTGATC AAGACACGCT TTACGGAAG TAGAGGCTAC TTGGTTGAAA	3180
GTAAGCGTGG TGGCGGAGGC TACATTGTA TAGGACGGAT TGAGTTTCT AGTCATCATG	3240
AAATGCTCCG GGAGCTGCTT TACTCGATTG GTGAGCGAGT CAGTCAAGAA ATTTATGAGG	3300
ATATTCTCCA GCTTTTGGTT GAGCAGGAAT TGATGACCAA GCAGGAGATG AATTGCTAG	3360
AATCAGTAGC TTTGGATCGC GTTTTAGGAG AAGAAGCTCC AGTTGTTCGA GCAAACATGC	3420
TACGTCAGAT CATAAAGAG GTAGATAGAA AAGGGAAGTA AGATGAACTA TTCAAAGCA	3480
TTGAATGAAT GTATCGAAAG TGCCTACATG GTTGCTGGAC ATTTTGGAGC TCGTTATCTA	3540
GAGTCGTGGC ACTTGTGAT TGCCATGTCT AATCACAGTT ATAGTGTAGC AGGGGCAACT	3600
TTAAATGATT ATCCGTATGA GATGGACCGT TTAGAAGAGG TGGCTTTGGA ACTGACTGAA	3660
ACGGACTATA GCCAGGATGA AACCTTACG GAATTGCCGT TCTCCGCTCG TTTGCAAGTT	3720
CTTTTGTATG AAGCAGAGTA TGTAGCGTCA GTGGTCCATG CTAAGGTACT AGGGACAGAG	3780
CACGTCCTCT ATGCGATTTT GCATGATAGC AATGCCTTGG CGACTCGTAT CTTGGAGAGG	3840
GCTGGTTTTT CTTATGAAGA CAAGAAAGAT CAGGTCAAGA TTGCTGCTCT TCGTCGAAAT	3900
TTAGAAGAAC GGGCAGGCTG GACTCGTGAA GATCTCAAGG CTTTACGCCA ACGCCATCGT	3960
ACAGTAGCTG ACAAGCAAAA TTCTATGGCC AATATGATGG GCATGCCGCA GACTCCTAGT	4020
GGTGGTCTCG AGGATTATAC GCATGATTTG ACAGAGCAAG CGCGTTCTGG CAAGTTAGAA	4080
CCAGTCATCG GTCGGGACAA GGAAATCTCA CGTATGATC AAATCTTGAG CCGGAAGACT	4140
AAGAACAACC CTGTCTTGGT TGGGGATGCT GGTGTCGGGA AAACAGCTCT GCGCTTGGT	4200
CTTGCCAGC GTATTGCTAG TGGTGACGTG CCTGCGGAAA TGGCTAAGAT GCGCGTGTTA	4260
GAACCTGATT TGATGAATGT CGTTGCAGGG ACACGCTTCC GTGGTGACTT TGAAGAACGC	4320
ATGAATAATA TCATCAAGGA TATTGAAGAA GATGGCCAAG TCATCCTCTT TATCGATGAA	4380
CTCCACACCA TCATGGGTTT TGGTAGCGGG ATTGATTCTA CTCTGGATGC GGCCAATATC	4440
TTGAAACCAG CCTTGGCGCG TGGAACCTTG AGAACGGTTG GTGCCACTAC TCAGGAAGAA	4500
TATCAAAAAC ATATCGAAAA AGATGCGGCA CTTTCTCGTC GTTTCGCTAA AGTGACGATT	4560
GAAGAACCAA GTGTGGCAGA TAGTATGACT ATTTTACAAG GTTTGAAGGC GACTTATGAG	4620
AAACATCACC GTGTACAAAT CACAGATGAA GCGGTTGAAA CAGCGTTAA GATGGCTCAT	4680

861

CGTTATTAA CCAGTCGTCA CTTGCCAGAC TCTGCTATCG ATCTCTTGA TGAGGCGGCA	4740
GCAACAGTGC AAAATAAGGC AAAGCATGTA AAAGCAGACG ATTCAGATTT GAGTCCAGCT	4800
GACAAGGCCC TGATGGATGG CAAGTGGAAG CAGGCAGCCC AGCTAATCGC AAAAGAAGAG	4860
GAAGTACCTG TCTACAAAGA CTTGGTGACA GAGTCTGATA TTTTGACCAC CTTGAGTCGC	4920
TTGTCAGGAA TCCCAGTTCA AAAACTGACT CAAACGGATG CTAAGAAGTA TTTAAATCTT	4980
GAAGCAGAAC TCCATAAACG GGTATTCGGT CAAGATCAAG CTGTTTCAAG CATTAGCCGT	5040
GCCATTCGCC GCAACCAGTC AGGGATTTCG AGTCATAAGC GTCCGATTGG TTCCTTTATG	5100
TTCTAGGGC CTACAGGTGT CGGAAAACT GAATTAGCCA AGGCTCTGGC AGAAGTTCTT	5160
TTTGACGACG AATCAGCCCT TATCCGCTTT GATATGAGTG AGTATATGGA GAAATTTGCA	5220
GCTAGTCGTC TCAACGGAGC TCCTCCAGGC TATGTAGGAT ATGAAGAAGG TGGGGAGTTG	5280
ACAGAGAAGG TTCGAATAA ACCCTATTCC GTTCTCCTCT TTGATGAGGT AGAGAAGGCC	5340
CACCCAGATA TCTPTAATGT TCTCTGCAG GTTCTGGATG ACGGTGCTCT GACAGATAGC	5400
AAGGGACGCA AGGTCGATTT TTCAAATACC ATTATCATTA TGACATCGAA TCTAGGTGCG	5460
ACTGCCCTTC GTGATGATAA GACTGTTGGT TTTGGGGCTA AGGATATTCG TTTTGACCAG	5520
GAAATATGG AAAACGCAT GTTTGAAGAA CTGAAAAAG CTTATAGACC GGAATTCATC	5580
AACCGTATTG ATGAGAAGGT GGTCTTCCAT AGCCTATCTA GTGATCATAT GCAGGAAGTG	5640
GTGAAGATTA TGGTCAAGCC TTTAGTGCCA AGTTTGACTG AAAAAGGCAT TGACTTGAAA	5700
TTACAAGCTT CAGCTCTGAA ATTGTTAGCA AATCAAGGAT ATGACCCAGA GATGGGAGCT	5760
CGCCCACTTC GCAGAACCCT GCAAACAGAA GTGGAGGACA AGTTGGCAGA ACTTCTTCTC	5820
AAGGGAGATT TAGTGGCAGG CAGCACACTT AAGATTGGTG TCAAAGCAGG CCAGTTAAAA	5880
TTTGATATTG CATAAAAGAA TAAAAGTATC AGCATCTGAC CATAAGTCAC AGTGGAGTGA	5940
AATTCAATGA AAATCAAAGA GCAAACACTAG CAGCTAGCCG CAGGTTGCTC AAAACACTGG	6000
TTTGAGGTG CAGATAGAGC TGACGTGGTT TGAAGAGATT TTCGAAGACT ATGAAACTAA	6060
AACCTATAGC TTCTAAACGA TCCGTGGTTT TCATCATTCA ACACAAAATT CATATGTTTA	6120
TTACCCCTCG TCGTATTGT CTTAGAGCGT GTGTAGTAGA AAAAGAGCAG TCTTATCTGA	6180
AATTTTATT CTTTCAAAAG AGACCTGTTT CTTTTTGCA TGTCAAATCC GTTCTAGCTG	6240
GTATTTGAAA AATCAAACATA ATATTCAATG AAAATCAAAG AACAACTAG GAAGCTAGCC	6300
GCAGTTGCT CAAAACACTG TTTTGAGGTT GTAGATAGAG CTGACGTGGT TTGAAGAGAT	6360
TTTCGAAGAG TATAAGCTGC AAGATGAATG ATTTCTTGT ATTGACGTTG TTGTTGACAA	6420

862

AAAGTAGCGG ATAAATGAAA TCCATTCCAT TATCATAGAT GATAGGCTGG TAGGAAATTT	6480
TCAAATAGCA TACAGGAAAT AGATGTATGG AGTTCTGGTA GTAGAAAGGG AGAGAGATGA	6540
ACATTTTAGT TGCAGATGAC GAGGAAATGA TTAGAGAAGG AATTGCAGCA TTTCTGACAG	6600
AAGAGGGTTA TCATGTCATT ATGGCTAAGG ATGGACAAGA GGTCTTGGAA AAATTTCAAG	6660
ATCTCCCTAT CCATCTCATG GTACTGGATT TAATGATGCC TAGGAAGAGT GGTTTGAAG	6720
TGTTAAAGA AATCAATCAA AAGCACGATA TTCCTGTCAT CGTCTTGAGT GCTCTGGGAG	6780
ATGAAACTAC TCAGTCACAG GTATTTGATC TCTATGCTGA TGATCATGTG ACAAACCTT	6840
TTTCTTTGGT ACTGCTTGTG AAGCGTATTA AGCGCTTAT CAGACGTTAC TACGTCATAG	6900
AGGATCTTTG GCGATATCAG GATGTAACAG TGGATTTTAC CTCTTACAAA GCACATTATA	6960
AAAATGAAGA AATTGATCTC AAACCAAGG AATTACTGGT ACTAAAGTGT TTGATTCAGC	7020
ATAAAAATCA AGTTTAAAGT AGAGAGCAGA TATTGGAAGA AATTTCAAAA GATGTAGCTG	7080
ATTTACCTTG TGATAGGGTC GTTGATGTCT ATATTCGTAC TCTTCGCAA AAATFAGCTT	7140
TAGATTGTAT CGTGACTGTG AAAAATGTTG GGTATAAGAT TAGCTTATGA TAAAAATCC	7200
TAAATTATTA ACCAAGTCTT TTTTAAGAAG TTTTGCAATT CTAGGTGGTG TTGGTCTAGT	7260
CATTCATATA GCTATTTAT TGAACCTTCC TTTTATTAT ATTCAACTGG AGGGGAAAA	7320
GTTTAAAGAG AGCGCAAGAG TGTTTACGGA GTATTTAAAG ACTAAGACAT CTGATGAAAT	7380
TCCAAGCTTA CTCCAGTCTT ATTCAAAGTC CTTGACCATA TCTGCTCACC TTAAAGAGA	7440
TATTGTAGAT AAGCGGCTCC CTCTTGTCGA TGACTTGGAT ATTAAAGATG GAAAGCTATC	7500
AAATTATATC GTGATGTTAG ATATGTCTGT TAGTACAGCA GATGGTAAAC AGGTAACCGT	7560
GCAATTTGTT CACGGGGTGG ATGTCTACAA AGAAGCAAAG AATATTTTGC TTTTGTATCT	7620
CCCATATACA TTTTGGTTA CAATTGCTTT TTCCTTTGTT TTTTCTTATT TTTATACTAA	7680
ACGCTTGCTC AATCCTCTTT TTTACATTTT AGAAGTGACT AGTAAATGC AAGATTTGGA	7740
TGACAAATAT CGTTTTGATG AAAGTAGGAA AGATGAAGTT GGTGAAGTTG GAAAACAGAT	7800
TAATGGTATG TATGAGCACT TGTGAAGGT TATTTATGAG TTGGAAGTC GTAATGAGCA	7860
AATTGTAAAA TTGCAAAATC AAAAGGTTTC CTTTGTCCGC GGAGCATCAC ATGAGTTGAA	7920
AACCCCTTTA GCCAGTCTTA GAATTATCCT AGAGAATATG CAGCATAATA TTGGAGATTA	7980
CAAAGATCAT CCAAAATATA TTGCAAAGAG TATAAATAAG ATTGACCAGA TGAGCCACTT	8040
ATTAGAAGAA GTACTGGAGT CTTCTAAATT CCAAGAGTGG ACAGAGTGTC GTGAGACCTT	8100
GACTGTAAAG CCAGTTTATG TAGATATTTT ATCAGCTTAT CAAGAATTAG CTCATTCAAT	8160
AGGTGTTACA ATTGAAAATC AATTGACAGA TGCTACCAGG GTCGTCATGA GTCTTAGGGC	8220

863

ATTGGATAAG GTTTTGACAA ACCTGATTAG TAATGCAATT AAATATTCAG ATAAAAATGG	8280
GCGTGTAATC ATATCCGAGC AAGATGGCTA TCTCTCTATC AAAAATACAT GTGCGCCTCT	8340
AAGTGACCAA GAACTAGAAC ATTTATTTGA TATATTCTAT CATTCCTCAA TCGTGACAGA	8400
TAAGGATGAA AGTCCCGGTT TGGGTCTTTA CATGTGGAAT AATATTTTAG AAAGCTATCA	8460
AATGGATTAT AGTTTCTCC CTTATGAACA CGGTATGGAA TTAAAGATTA GCTGTAGAC	8520
AGATTAGTTT TTTATTAAAG TTCATATAGG GTTAACATAA GTGTGTTATT CTTTGTGTAG	8580
ATAAAAGAAA GGATACTAAT ATGGTATTAG CGATTATTTT AGTAACATTC TTTATTCGAT	8640
TGATTTTTTTT AAAGCGTTCG ATAGAGAATG AGAAACGAAT CCTTAGCAAT GGCGGGG	8697

(2) INFORMATION FOR SEQ ID NO: 124:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4317 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

AACCATACAT ACGGCAAGGC AAAGCTGACG CGGTTTGAAG AGATTTTCGA AGAGTATTAG	60
TTGCCTTTAA AGGCATCCAC CATCGTTTGA AATCTTCAT TTGAGAGAGT AATCCCTTTG	120
CCCATTTTAG TATGGTCTGG ACTCCAAGCA CGAATATCAA ACTTTGCAGG GGCACCATTA	180
AAGCTCACAC GGTAAATTC CTTGGTCCAA CCTTTTTCGT TTTCAGAAAG AGTCAACAAG	240
TGCTCTTCGA TTTCAAATGT AAATCTGCC ATTTTCTTCT CCTTTTTTAG TTTCATTAGT	300
TTATTCGTAA AATCTGTAG ATTTTAGGAA AATTTTATAT AATATTGATA TAAAGAAGG	360
GAGGCCAATA TGAGACATAA ATTCCAGCAA GTTCTAAATA AAATACATGA TTTTTTAAAT	420
GGATATGACC AACCTGACCA GACTGAAACC AACTCCCTTA CAGCCACTAT TGAAGAGGCT	480
ATCCAGAAAC AAACCGCTGT TCACCTTATC TTGTCTGAGA CAAGCTTTAC AGGTGACATC	540
ATCAAAATATG ATCAGCAAGG CCAGCAAATT ATCGTGAAAA ATTTTTCCAA AAATGTGAGC	600
CGGATTATCC GTATAAGCGA TATTCAACGC CTGCGATTG TCCCCTCAAC TGTCCTAAACA	660
GCCCCAAAAA ATAGATTTAA GAAAGAGTGA GATGTAGTTG CTTTATCCCA CTCTTTTTC	720
TTAGCGAATT TGTTCAAAAT GTAAATGAAC TGCGATATGA TCTCCATAAC CACTTCTTTC	780
CAAGTCACGT TGTAACGAT AGGAAATGTA GTGTTCTGCA ATGGTAATGT AACCTGCGCC	840
CAATAAACGA TGTTCACCA TAGATTGAAT CATACTGATA GTCGCACGTT CCACCTTGGC	900

864					
TTCTTGTA	AACTA	CCTTCTTAGT	GACTTGAGCA	AGATTTTGAC	GCAAATCATC 960
TGTCAAAACA	TAAACAGTTT	GGGCTGCCTT	CAAGATGGCT	TGGTAAATCT	TATCTGGATT 1020
AAATTCAGCA	ATTCGCCAT	TACGTTTGAT	TACTTGACATA	GGTTTCTCCT	TTATTCTTTG 1080
TTTCTTTGA	TTTCTGCCAG	CATTTTTTCT	TCTTCTACTG	TCAGTTGATA	ATGTTCAAGT 1140
AAATCCGGTC	TGCGCTCGTA	GGTTTCTT	AAACTCTCGT	ACAATCGCCA	CTGACGAATC 1200
TTTTCATGGT	GGCCACTCAT	CAATACATCT	GGCACGACCA	TGCCTCGATA	ATCATAGGGA 1260
CGTGTGTACT	GAGGATATTC	TAAAGACCT	GAAGAAAAAC	TATCATCTTG	GTGGCTAGAC 1320
TCCTTGCCAA	TCATTTCTGG	AATCAGGCGA	ACTGTAGCAT	CAATCATGGT	CATAGCTGCC 1380
AATTCTCCAC	CAGTGAGGAC	ATAGTCACCT	AGGGAATCT	CATCTGTTAC	CAAGTCTTA 1440
ATGCGCTCAT	CATAACCCCT	ATAGTGCCCA	CAGATAAAGA	TTAGCTCTTC	CTCTTGAGCC 1500
AAATCTTCAG	CATAAGCCTG	ATCAAACGTC	TTCCAGCAG	GATCAAGGAG	AATAACGCGC 1560
GGATTTTCT	TTTCAATAGC	ATCAAAGGAA	TCGAAAATAG	GTTGTGCTCT	GAGCAACATG 1620
CCCTGACCGC	CTCCGTAGGG	CTCATCATCT	ACATGACGGG	CCTTTTCAGC	ATTTTCTCGA 1680
AAATTATGAT	ACTGGATATC	CAAGAGCCCT	TTTTCTCGAG	CCTTTCCAAC	GATTGAGTGC 1740
TCCAGTGGAG	AAAACATCTC	TGGAAAGAGG	GTTAAAATAT	CAATCTTCAT	CGTCTAACCC 1800
TTCTAAGATT	TCCACATCGA	CCCGTTTACT	TGGAATATCA	ACATTGAGAA	CCACTGGTGG 1860
GATATAAGGT	AAAAGCAAAT	CACGTTTGCC	TTTTCGTTTG	ACCACCCAGA	CATCATTAGC 1920
ACCTGGTTGC	AGGATTTCTT	TGATGGTTCC	AACCAAGCTA	TCACCCTCAT	AGACTTCCAA 1980
ACCGATAATC	TCGTGATAGT	AAAATTCACC	ATCGTCTAGG	TCATTCAAAT	CTTCTCAGC 2040
GACCTTGAGA	CTGTATCCCT	TGTACTTTTC	GATAGTATTG	ATATGGTACA	TATCTTTGAA 2100
TTTAATAATG	TCAAAGTTCT	TCTGTTTACG	GTGGCTAGCG	ATGGTCACTG	TTTGGACAAA 2160
CTGATCTTTT	TCATCAAACA	AAACCAGCTC	AGCTCCTTTT	TTAAACCGTT	CTTCTGCAAA 2220
ATCCGTCACA	GACAAGACTC	GCATCTCCCC	CTGTAATCCC	TGCGTATTAA	CGATTTTCCC 2280
AACATTAAAG	TAGTTCATCT	TGTCTCCTGT	AATCTCCTTT	TTCCATCTT	ATTCTAACAA 2340
TTCTCGAATA	ATAGCCGCAA	TTTTTTCCGA	TTCTGACCAT	TGTAAATAAT	GGTGATTCCC 2400
TCCTAAAATG	AGTTTAGTAT	TGGAAGTCCA	ATATTCTGAT	TCTCTGTACT	CTTTTCTCT 2460
ATAAGGCTGA	CAAAAACAA	ATACAGGAAT	ATGAGCTTCT	ATAGATACAT	CCTCAAAATC 2520
TTCTCAGTA	ATCTCTCCAG	ATATCTGAAA	TTCTGGATCT	TGATTTTCCA	ACTCTAAGCC 2580
TTTTTCTTGC	ATTAATTCCC	AGATTTTTTT	ATTCGTTTCA	GGACTAAATG	TTGCTTGAGT 2640
TAAGTTCTTA	AAATAAAGTT	CAGGACCACA	CTCGTCAATC	AGCCTCATCT	GCTCTTCCAT 2700

865

TTCTGGATAA GGATTTTCTG AAAAATCAGC AAACATGACT TTTTtagTTG TCGGTTCAAT	2760
TGCTACTAAA GTCTGACGCT TAATTGGTTT CTCGAGTAAT TTGCAAGCTA AAATCCACT	2820
CCAATATGT GCACAAAGTA TATATTCAGA AATTCCTAAT TCTCAAGTA CTTCAAAAC	2880
CGCATCTGCA AGATTATCTA GATTTTTTCC AGCTTGGTCA TGAATCGGAC TCCTACCTGT	2940
GTTCGGA AAA TCAATTGTCA AATAACCAAT TGTAGGAGGA GGTTTTTCAA GTATAAGTGA	3000
AAAATTTTCA TAACTTGGTA GCAAACCTGC TCCGTTTAAA CAACTAGCA CTTCTTTTG	3060
CTTTTGATAA GTAACAGAGA GGCTACCAAT TTCTGTAGAT ACTTCAAACC TCTTCATAAA	3120
GAAATCCACT GATTCTATAT AATGAATTAT TAAAAATCCT TATCCTTTAT TTTATCACGT	3180
TCCAAGGATT TTCTCAAGTT GGAGGAAGGG GACAATATCT CTACTTTCCC TTCAATAATC	3240
CTTCCAAATT ATGTTTATGT TGGTAATTAA TGGCTGCGGT TTTGTCTTTC TCAAAGACAG	3300
TCTTGGTAA GTCAATATGA TTAATAGCTA CGATTGCGAC GGTGTAGTAA ATGATATCAG	3360
CCAGTTCTCT GGCAAGTTCC TCGTTCGAAT CCTATCCCTT CTTTTCGACC AGAGCGCCTA	3420
TTCAAAACCT CGACTACTTC TCCGACTTCC TCCACTAACT TCATAAGAG ACCTTCATCA	3480
GTCCGAGACT GCTGTTAATG TTCGATTAAG TAGTCTTGA ATTGCCTAAA CGTTCAATCT	3540
TTTATAGTAT ATTGAACTA GAATAGTACA CCTTTACTTC TAAACATTG TTAGAAATCG	3600
ATTTGACTGT CTGATCGAT TTGTCTGT TTTGTTTCAT TTTACTATAT CTTCTATTCC	3660
ACACAAAAA GCGAGACATC CGTCCCGCCC TTCTTATTTT TCGTCAATAA CGATTCTTAC	3720
TTTTTTGTAT TCAGTTGGGA CAGAGTAGAC AATCGTTCTT ATCGCAGAAA TAGTGCAGAC	3780
CTTACGACCG ATTACACGAC CCACATCGCT TTGATCAAGA TTCAAATGAT ATTCCAAAAA	3840
TTCTGGTGTA TCCTCAATCT TGATAGTTAA GGCATCTGGT TGTGAAATTA AGGGTTTCAC	3900
AATCGCAATA ATGAGATTTT CAATCGTATC CATCTGTCAA CCTACTTTAA ACTTATTTTG	3960
AAAATTTAGA ATCGTGGAAT TTTTCAATA CGCCTTCTTT TGAAAGGATG TTACGTACTG	4020
TGTCTGAAGG TTGAGCTCCA TTAGCCAACC ATGCAAGAAC GCGGTCTTCT TTCAAAGTTA	4080
CTTGGTTTTC AGCAACAAGT GGGTTGTAAG TTCCAACGT TTCGATGAAA CGTCCGTCAC	4140
GTGGTGAACG TGAATCTGCT ACGTTGATAC GGTAGAAAGG TTTTCTTTA GAACCCATAC	4200
GAGTCAAACG GATTTTAACT GCCATTTTAA AAGTCTCATT TCTTTAATTT TTTATTTTCGG	4260
TGAAATAGCT GAGCTATTTA GCACATGTTT TATTATAGCA GATTTCTGGC ATGTGTC	4317

(2) INFORMATION FOR SEQ ID NO: 125:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 4881 base pairs

866

(B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

AATTTATTTG ACTGGAAATT GTAGAGGGTT CTCGAAATTT CTTGAATGGT TAAAATAAGG	60
ACAAGAGAAA ACATGGATAT CTATATCCTT GTGCCAAAAA AACCCTGCC CTCCCAGAC	120
CAACCTGAGG AAAGCAGTGA TTCTTATTTT AGGAGTTAGG AATGAATACA CGAAATCAAT	180
TTAGCTGATT ATTTTTTGTT TTTCAAGAAT TCATCGTATT GTTTTTGCAT TTCGTTCAAT	240
ACTTTTTCGT AGGCACCTTC AGATTTCAAT TTTTCCATCA ATTCTGGAAT CGCTTTATCT	300
GGGTCTACAG TACCACTGTT GATAGCTGTA TCAAATTGTT GCATTGTGTT AGCAATAGCT	360
GAGATTTTCA GATTTACATT GTCAGTATTG AAGATAAATC CAAGCGCTGG AGATTTCTTA	420
GCTTCTGCCA ATTCTTTCTT AGAATTTTCG ATTTGTTGGT CTGTAACGTT TTCGTTGATG	480
TAAAGGATCC AGTTGTTACC AGTGTTCAT CCACCCATGT GAGTGTTCCT TTTGTAGCCA	540
TCAAGAACGC GAACACGGTT TTCTTTACCT TCAATTTTTT CCCAGTTCTT GCCTTCTGGA	600
CCGTAAACAA GACCGTTCAA GAGTTCTGGG TTCGTATTCA AGAGGTTCAA GATTTCCATT	660
GATTTTCTTT TGTCTTAGA GTTGTGAG ATGACAAAGT TAGCAACTTG TGTGTTTGG	720
TTTTTCTTGA TGAAGTTAGT AATTGGTTTG ATTTGGATAT CTTTGTGGC AACACGTGAA	780
AGCAAGCTGT TACCGTAGTC AGCTGGTCCT ACTGTTTCTT CACGAACGAA CCAAGTATCT	840
TGTTGAAGGT CAAAGGAAGT ATCGCTTGTT GCGACGCTTT TTGGAATGTA GCCAGCTTCA	900
TAGAATTTGT GAAGAGTCTT CAAGTGTCTT TTGAAACGAG GCACTTCGTA ACGGTTTACA	960
ACTTTAGTAG TATCGCCTTC AAGGTCGATA ACGAATGGAA GACCGTTTGC TACTGGGTAG	1020
TCAAAATAT CAGATGGGAT GAAAACCTTA CCAATAGCAA ATGGTACTAC GTCTGGAGCT	1080
TTTTCTTTGA TTTGTTTCAA GACTGGCTCA AGAGTTTCGT AAGAAGTAAC ACCTGAAATA	1140
TCGATACCAT ATTTAGCAAG GAGAGTTCCG TTGAAGGCAA AGTTTGTAGA TGATGCAACG	1200
TTGGCTGCAA CTGGAACAGC GTAAATCTTA CCATTTACAG TATTACCCTT GATGTAAGCT	1260
GGGTCAAGTG CTTTGTAAGG GTCTTTACCT TCTTTTTTGT ACAATTCTGT CAAGTCAGCG	1320
TAAGCACCTT TTTGAGCATT TACAATATAG TTATCTGCAA AGGCAATATC ATAGTTTTC	1380
CCAGATGATG TGATAACTGA CATTTTCTTA CCATAGTCAC CCCAGCCAAG GTATTGGATA	1440
TCCAATTTGG CACCAACTTT TTCTTCAATG ATTTTGTGTT CATTTGCTAA CAATTCATCC	1500
AAGTTGTCTG GTTGTCAACC GATTTGGTAC ATTTTGATAA CAGGTTTGTC ACCTGAATCA	1560

867

GCAGCTTTT	TGCTGTTACC	TGTCAAATTT	CCACAAGCAG	CAAGACCTGC	AGCCAGAGCG	1620
ACTACACTAG	CAGATGCAAA	AGCATATTTT	TTCCAGTTT	TCATGATAAA	AACTCCTTTT	1680
TTTATTTT	AACTTATAAA	CAATGTAATG	ATCTTATACT	CAATAAAAAT	CAAAGAGCAA	1740
ACTAGAAAAC	TAGCCGCAGG	CTGCTCAAAG	CACTGCTTTG	AGGTTGTAGA	TAAGACTGAC	1800
GAAGTCAGTT	ACATATATCT	ACGGCAAGGC	GACGTTGACG	CGGTTTGAAT	TTGATTTTCG	1860
AAGAGTATTA	ACTTCACACA	AGGGAAGTTG	GGAAGTGAAG	AATGTTATTT	CTCAATAAGC	1920
ACTATTTCTT	CACACCACCG	ATAGTCAAAC	CTTTTACAAA	GTAGCGTTGG	AAAAATGGAT	1980
ACAAAATCGC	GATTGGAAGG	GTTGCAACCA	CAACCATGGC	CATACGACCT	GTTTCTTTTCG	2040
GTAGAGCAAC	TCCCAGTTGA	CCAATCAAGC	CGACCGCTTT	GGCAATGTAG	TCCATATTTT	2100
GTTGGATTTG	CATGAGCAAA	TATTGCAATG	GATACAAGTT	GTCACCTCTG	ATGTAAAGAA	2160
GGGCGTTGAA	CCAGTCATTC	CAGAAACCAA	GAGCTGTTAA	GAGCGTGATG	GTTGCGATAC	2220
CTGGTAGTGA	CAATGGCAAA	CAGATTTGGA	AGAAAATCCG	GGCCTCACTG	GCACCATCGA	2280
TACGAGCCGA	TTCTAGAATG	GCTTCTGGAA	TGGTCTTCTT	GAAGAAGGAA	CGCATCAAGA	2340
TGATGTTAAA	TGGTGAGAGA	AGCATTTGGA	CAATCAAGGC	CCAAACAGTG	TCACCAAGCT	2400
GAAGTACACG	GGTCACCATG	ATATAACCTG	GTACCAAAAC	AGCGTTGAAC	AACATACTGA	2460
GAAGGACGAA	GATGGTAAAG	AATCTGCGAT	ACTTAAAGGT	TGTCCGTGAA	ATAGCGTAGG	2520
CATAGGTTGT	TGTGATAAAG	ACATTTGTCA	ATGTCCCAAC	TACGGTTACA	AAGACAGAGA	2580
TGAAGAGGGC	TTGTAGGATT	TTATCCTTAA	ACTGTGCCAA	AAACTCAAAA	CCGTCTAAGC	2640
CAAATTTGGA	TGGGAAGAAG	CTATAGCCGT	ATTGGAGGAG	GCTTTTCTCG	TCTGTCACTG	2700
AAATAATGAT	AACGAATACA	AAAGGTAGGA	TACAAGAGAG	GGCAATCAAA	CCCGAAATGA	2760
TACTGAAGAA	GATATCTGCT	TTCTTACTGA	AGGAGTGAAT	GCCGACATTA	TCAATTTT	2820
CTTTTTTAAT	TTTCTTTT	GCCATATTCT	CCTCCTTTCT	AGAACAAAGC	TGAGTTTGGA	2880
TCGACTCGTC	TTGCAAGCAA	GTTTGATAGG	ATAACCAGAA	TCAAACCAAC	AACGGATTGG	2940
TAAAGACCGG	CTGCTGCAGC	CATACCGATA	TCTGCTGTCT	GAGTCAAACC	ATTAAAGACA	3000
TATACGTCCA	AAACGTTGGT	TACATTGTAA	AGCTGACCAG	CATTGTGTGG	GATTTGATAG	3060
AAGAGACCGA	AGTCTGCGCG	GAAGATATTT	CCGACTGCAA	GGATGGTCAA	TACAGTTACA	3120
AGCGGAGTCA	ACTGAGGAAT	GGTTACGTTG	CGAATACGTT	GCCACTTGCT	AGCTCCGTCC	3180
ACTGTGCGTG	CTTCGTAGTA	GGTTGGATCA	ATTCCCATGA	TCGTGCGATA	GTACATGACA	3240
CTGCTATATC	CAAAGCCTTT	CCAAATACCT	AGGAAAAGTA	GGAGATAGGG	CCAGATGCCC	3300

868

AGGTCAGCGT AGAAATTGAC TTCTTTGAGA CCAAGACTTT CCAATAGATG ATTGAACACC	3360
CCTTTATCAA TATTTAGGAA GGCATCTGTA AAGAACTGA TGATAACCCA AGACAAGAAG	3420
TAAGGGAACA ACATAGAAGT TTGAAAAATC TTCACCATTC TCTTAGAACG GAGCTCGCTG	3480
AGGATAATGG CAATCCCTAC AGATACAACT AAACCTAGAA AGATAAAGCC AAGATTGTAG	3540
AGGACAGTAT TTCGTGTGAT AATAAAGGCG TCTCTGAAC TAAATAAGAA TCTAAAATTA	3600
TCGAGTCCGA CCCATTTACT ATTTATGATA CTATCTATGA AACCATTACT GGTCAATGTTG	3660
TAGTCTTTGA AGGCAACCAC GTTCCCAAAT ACTGGAATGT AAAAGAATAG AATCAACCAG	3720
AGTGCCCTTG GCAAAACCAT CAAGAGAAAG ATCCAGTTGT CTCTCAATGT TTTTGAAAAC	3780
TTTTTCATAA TTTCTCCCT TTTTATTTTG ATATCCATCT AAAAATTCCT TTTTAGACTT	3840
TTGATAACGA TTACATTATT AGTATACTCC TATTTGCAGG TTAGGTTAAA CTCCTAATTA	3900
TAGAAAAAAC TCCACAAATT ATGTAGCAGA TTTAAACTT TATCACCCT ATCAAACAAA	3960
TGTCCTAAAT CAATTGTTTA TTTTATCTCT ATTAGCCAG TGATGGCGTC ACTCTGTTAT	4020
AAGCATCCAA CAACGGGGTA TACTGAAAA TCTCCAGACT AGGGAACCTCA GCGATAGTTC	4080
CTAATCTGGA GATTTTAAAT ATGTTATTAG GCGTTTGCTT TCAACTTAGC AATAACCTCT	4140
TTAAGATTAT CAATCAACTC TGCTGCAGTA TGCTCAGAGC CTTTTTCATC TGCCAAGAAC	4200
AAAAGTCTT TTTGAAGTTC TTTTGTAGAG TTTTCAAGGA CATCCTTATC TACTGTTTCA	4260
AGGTTTGAGT CTTAAGAAG TTTACTTAAT TCCTTGGCTA ATTTCTTGAG TTTGATTTGC	4320
AGACTCATCT TCTCCTGCTG TTTCTTTGCC CGCTGTTTGT CCTCCATCCT TAGTTGCTGA	4380
CTGGCTTTCC TTAATGGACT CTAGGGAAGC AATGGCATCT TTGACTGTTT GCAAGATATC	4440
ACGTAAACCT TGCTCTGTCA AACTATCATC TGCAAAAGCT TTATTAGCCT CTGCCAAAAC	4500
CAGACGTGCT GAATCTGTGG TAGGATTCGA TACACCTGTC AATGATCTCA AAAGATTTTC	4560
TAAGGTTTGA GTCTGCTTAC TAATACTAGA CTAATAATCAA AAAGTATTAT ATAACAGTGA	4620
TATGAAATCA ACTAAAGAAG AAATCCAAAC CATCAAACA CTTTTAAAAG ACTCTCGTAC	4680
AGCTAAATAT CATAAACGCC TTCAAATCGT TCTATTTTGT CTGATGGGCA AATCTTATAA	4740
AGAGATTATA GAACTTTTAT AGTAGTTTGA AATAAGATGT GAACATCTCT ATCAGGAAAG	4800
TCAAATTAAT TTATAGAAAT ATTTTAGCAG CCAAGGTGTA CTGTTATAGA TTCAATACAC	4860
TATACTTGGT GGTTTAGCTC G	4881

(2) INFORMATION FOR SEQ ID NO: 126:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 13121 base pairs
 - (B) TYPE: nucleic acid

869

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

AGGATCCCCG GAAAAGGAGA CTAAAAATGA AGAAAAAATT TCTAGCATTT TTGCTAATTT	60
TATTCCCAAT TTTCTCATTA GGTATTGCCA AAGCAGAAAC GATTAAGATT GTTCTGATA	120
CCGCCTATGC ACCTTTTGAG TTTAAAGATT CAGATCAAAC TTATAAAGGA ATTGATGTTG	180
ACATTATTAA CAAAGTCGCT GAGATTAAAG GCTGGAACAT TCAGATGTCC TATCCTGGAT	240
TTGACGCAGC AGTCAATGCG GTTCAAGCTG GGCAAGCCGA CGCTATCATG GCAGGGATGA	300
CAAAGACTAA AGAACGTGAA AAAGTCTTCA CCATGTCTGA TACTTACTAT GATACAAAAG	360
TTGTCAATTG TACTACAAAG TCACACAAAA TTAGCAAGTA CGACCAATTA ACTGGCAAAA	420
CCGTGGGTGT TAAAAACGGA ACTGCCGCTC AACGTTTCCT TGAAACAATC AAAGATAAAT	480
ACGGCTTTAC TATTAAAACA TTTGACACTG GTGATTTAAT GAACAACAGC TTGAGTGCTG	540
GTGCCATCGA TGCCATGATG GATGACAAAC CTGTTATCGA ATATGCCATT AACCAAGGTC	600
AAGACCTCCA TATTGAAATG GATGGTGAAG CTGTAGGAAG TTTTGCTTTC GGTGTGAAAA	660
AAGGAAGTAA ATACGAGCAC CTGGTACTG AATTTAACCA AGCCTTGCTC GAAATGAAAA	720
AAGATGGTAG TCTTGATAAA ATTATCAAGA AATGGACTGC TTCATCATCT TCAGCAGTGC	780
CAACTACAAC TACTCTCGCA GGATTAAAAG CTATTCTGT TAAGGCTAAA TATATCATTG	840
CCAGCGATTG TTTCTTGCC CCTTTGTTT TCCAAAATC AAGCAACCA TACACTGGTA	900
TTGATATGGA ATTGATTAAG GCAATCGCTA AAGACCAAGG TTTTGAAATT GAAATCACCA	960
ACCCTGGTTT TGATGCTGCT ATCAGTGCTG TCCAAGCTGG TCAAGCCGAT GGTATCATCG	1020
CTGGTATGTC TGTCACAGAT GCTCGTAAGG CAACTTTTGA CTTCTCAGAA TCATACTACA	1080
CTGCTAATAC CATTCCTGGT GTCAAAGAAT CAAGCAATAT TGCTTCTTAT GAAGATCTAA	1140
AAGGAAAGAC AGTCGGTGTT AAAAACGGAA CTGCTTCTCA AACCTTCCTA ACAGAAAATC	1200
AAAGCAAATA CGGCTACAAA ATCAAAACCT TTGCTGATGG TTCCTCAATG TATGACAGTT	1260
TAAACACTGG TGCCATTGAT GCCGTTATGG ATGATGAACC TGTCTCAAA TATTCTATCA	1320
GCCAAGGTCA AAAATTGAAA ACTCCAATCT CTGGAACCTC AATCGGTGAA ACAGCCTTTG	1380
CCGTAAAAA AGGAGCAAAT CCAGAACTGA TTGAAATGTT CAACAACGGA CTTGCAAACC	1440
TTAAAGCAAA CGGTGAATTC CAAAAGATTC TTGACAAATA CCTAGCTAGC GAATCTTCAA	1500
CTGCTTCAAC AAGTACTGTT GACGAAACAA CGCTCTGGGG CTTGCTTCAA AACAACTACA	1560

870

AACAACTCCT	TAGCGGTCTT	GGTATCACTC	TTGCTCTAGC	TCTTATCTCA	TTTGCTATTG	1620
CCATTGTCAT	CGGAATTATC	TTCGGTATGT	TTAGCGTTAG	CCCATACAAA	TCTCTTCGCG	1680
TCATCTCTGA	GATTTTCGTT	GACGTTATTC	GTGGTATTCC	ATTGATGATT	CTTGACGCCT	1740
TCATCTTCTG	GGGAATTCCA	AAC TTCATCG	AGTCTATCAC	AGGCCAACAA	AGCCCAATTA	1800
ACGACTTTGT	AGCTGGAACC	ATTGCCCTCT	CACTCAATGC	GGCTGCTTAT	ATCGCTGAAA	1860
TCGTTTCGTG	TGGTATTTCAG	GCCGTTCCAG	TTGGCCAAAT	GGAAGCCAGC	CGAAGCTTGG	1920
GTATCTCTTA	TGGA AAAACC	ATGCGTAAGA	TTATCTTGCC	ACAAGCAACT	AAATTGATGT	1980
TGCCAAACTT	TGTCAACCAA	TTCGTTATCG	CTCTTAAAGA	TACAACTATC	GTATCTGCTA	2040
TCGGTTTGGT	TGAACTCTTC	CAAACTGGTA	AGATTATCAT	TGCTCGTAAC	TACCAAAGTT	2100
TCAAGATGTA	TGCAATCCTT	GCTATCTTCT	ATCTTGTAAT	TATCACACTT	TTGACTAGAC	2160
TAGCGAAACG	CTTAGAAAAG	AGGATTTCGT	AATGGCAAAA	TTAAAAATTG	ATGTAAATGA	2220
TTTACACAAG	CACTATGGAA	AAAATGAAGT	CCTAAAAGGA	ATTACGACTA	AGTTCATGA	2280
AGGAGATGTT	GTTTGTATCA	TCGGTCCTTC	AGGTTCTGGT	AAGTCAACTT	TCCTCCGTAG	2340
CCTCAATCTT	TTAGAAGAAG	TCACTAGCGG	TCACATCACT	GTGAACGGCT	ATGATTTAAC	2400
TGAAAAAACA	ACCAATGTTG	ACCACGTCCG	TGAAAATATC	GGCATGGTAT	TCCAACACTT	2460
CAACCTCTTC	CCTCATATGT	CTGTATTGGA	CAACATCACC	TTTGCTCCTA	TTGAGCACAA	2520
GTTGATGACT	AAGGAAGAAG	CTGAGGAATT	GGGAATGGAG	TTGCTTGAAA	AGGTGGACT	2580
AGCAGATAAA	GCTAATGCCA	ATCCAGATAG	CCTATCAGGT	GGTCAAAAAC	AACGTGTGGC	2640
CATCGCTCGT	GGCCTAGCAA	TGAATCCAGA	CATCATGCTC	TTGATGAAC	CAACTTCTGC	2700
CCTTGACCCCT	GAGATGGTTG	GAGACGTACT	TAACGTTATG	AAGGAATTGG	CTGAGCAAGG	2760
CATGACCATG	ATTATCGTAA	CCCATGAGAT	GGGATTTGCT	CGTCAGGTTG	CCAACCGCGT	2820
TATCTTTACT	GCAGATGGCG	AGTTCCTTGA	AGACGGAACA	CCTGACCAAA	TCTTTGATAA	2880
CCCACAACAC	CCTCGTCTGA	AAGAGTTCTT	AGATAAGGTC	TTAAACGTCT	AAACTCAAAC	2940
TGTAAGGATT	TCCTTGCACT	TTTCTACCT	CGTATTGGAA	TTTTTGATTT	TTGCGAAAAT	3000
TATGTTAGAA	TTAAGTTTAT	GAAATGAGGT	TTCTCATAC	CTAGCAAGAC	TAGGAATAAA	3060
AATAGAAATT	AGGTAGCTAG	ATGTCATCTA	AGGTATTGTG	TACAATTTTC	GGTGCAGAGT	3120
GAGACCTGGC	TAAACGCAAG	CTCTACCCTT	CCCTTTTTCG	ACTATATCAA	TCCGGCAATC	3180
TTTCCAAGCA	CTTTGCCGTT	ATTGGAAC TG	CCCGTAGACC	TTGGAGTAAG	GAATATTTTG	3240
AATCTGTAGT	TGTCGAGTCC	ATCCTTGATT	TGGCAGATAG	TACCGAGCAA	GCCCAAGAAT	3300
TTGCTAGCCA	CTTCTACTAT	CAAAGCCATG	ATGTCAATGA	TTGCGAACAT	TATATTGCTT	3360

871

TGCGTCAATT	ACAAGCTGAG	CTTAATGAAA	AATACCAAGC	TGAACACAAT	AAGCTCTTCT	3420
TCTTGTCTAT	GGCACCTCAG	TTCTTTGGAA	CCATTGCCAA	ACACCTCAAA	TCTGAAAACA	3480
TTGTCGATGG	CAAAGGTTTT	GAGCGCTTGA	TCGTTGAAAA	ACCATTGCGT	ACAGATTACG	3540
CAACTGCAAG	CAAGTTGAAT	GACGAACTCC	TAGCAACATT	TGACGAAGAA	CAAATTTTCC	3600
GTATCGACCA	TTATCTTGGT	AAGGAAATGA	TCCAAAGCAT	CTTTCAGATT	CGCTTTGCAA	3660
ACTTGAATTT	TGAAAACGTT	TGGAACAAGG	ATTTTATCGA	CAATGTTCAA	ATTACCTTTG	3720
CGGAGCGCTT	GGGTGTAGAA	GAACGTGGTG	GCTACTATGA	CCAATCCGGT	GCCCTCCGTG	3780
ACATGGTCCA	AAACCACACT	CTACAACCTC	TTTCGCTCCT	CGCCATGGAC	AAACCAGCAA	3840
GCTTCACAAA	AGACGAGATT	CGTGCTGAAA	AGATTAAGGT	CTTTAAAAAC	CTCTATCATC	3900
CAACTGATGA	AGAACTCAAA	GAACACTTTA	TCCGTGGGCA	ATACCGCTCT	GGTAAGATTG	3960
ATGGCATGAA	ATACATCTCT	TATCGTAGCG	AGCCAAATGT	GAATCCAGAA	TCAACAACCTG	4020
AAACCTTTAC	ATCTGGTGCC	TTCTTTGTAG	ACAGCGATCG	ATTCCGTGGT	GTTCTTTTCT	4080
TTTTCCTGAC	AGGTAAACGA	CTGACTGAAA	AAGGAACTCA	TGTCAACATC	GTCTTTAAAC	4140
AAATGGATTG	TATCTTTGGA	GAACCACTTG	CTCCAAATAT	TTTGACCATC	TATATTCAAC	4200
CAACAGAAGG	CTTCTCTCTT	AGCCTAAATG	GGAAGCAAGT	AGGAGAAGAA	TTTAACTTGG	4260
CTCCTAACTC	ACTTGATTAC	CGTACAGATG	CGACTGCAAC	TGGTGCTTCT	CCAGAACCAT	4320
ACGAAAAATT	GATTTATGAT	GTCTAAATA	ACAACTCAAC	TAACTTTAGC	CACTGGGATG	4380
AAGTTTGTGC	GTCATGGAAG	TTGATTGACC	GTATTGAAAA	GCTCTGGGCT	GAAAAATGGT	4440
CCCCACTTCA	TGACTATAAA	GCTGGAAGCA	TGGGACCTCA	AGCCAGCTTT	GACCTACTTG	4500
AAAAATTCGG	TGCCAAATGG	ACTTGGCAAC	CAGATATCAC	CTATCGTCAA	GATGGTCGCT	4560
TAGAATAAAA	AAATTTCTTG	CAAGTTTATG	CcTTGCAGGA	TTTTTGCTTC	TGATTAGATT	4620
AAACCTTCCA	AGAGACCTTT	CATAAAGTTT	TCTGAGTTAA	ACTCTCCAAT	ATCATCGATT	4680
TTTTCACCAA	AACCAATCAA	TTTACAGGA	ATATTGAGTT	CTTCACGAAT	GGCTAGAACC	4740
ACACCTCCTC	GAGCAGTTCC	ATCAATCTTA	GTCAAAACAA	TTCCCGTTAA	AGGTGTGATT	4800
TTCGAAAAAT	CTTTGGCCTG	TACTAGGGCA	TTTTGACCTG	TTGATGCATC	AAGTGCCAAG	4860
AAGGTTTCAT	GTGGTGCTTC	TGGCACAACA	CGTTTGATAA	TACGACCAAT	CTTTTCCAAC	4920
TCAGCCATAA	GGTTATCCTT	ATTTTGACAG	CGACCAGCAG	TATCAATCAT	GAGAAATATCG	4980
ATACCTTCAG	TCACGGCACG	TTCCATACCA	TCAAAGACCA	CGCTGGCTGG	ATCAGCTTTT	5040
TCAGGTCCAG	TTACTACTGG	AACATCTACT	CGTCGGCCCC	ATTGAGCTAG	CTGAGCTACT	5100

872

GCACCCGCAC	GGAAGGTATC	TGCTGCAACC	AGCATGACCT	TCTTACCAGC	TTGTTTGTAG	5160
CGGTGGGCTA	GTTCCTCGAT	AGAAGTTGTT	TTCCCAACAC	CATTACACACC	AACAAAGAGC	5220
ATAACTGTCA	AGTTATCTTG	GAAGTGGATG	CTTTCATCGT	AGCTACCATC	CTTTTCATAA	5280
AGCTCAACCA	ATTTCTCAAT	GATGACACGA	CGAAGTACAT	CAGGTTTCCT	GGCATTTTCA	5340
AGCTTGGCTT	CGTAACGTAG	TTCCCTCCGT	AAGTTAGAAG	CGACTTGGAC	ACCAACATCA	5400
CTCATAATCA	GCAGTTCCTC	CAGTTCCTCG	AAAAATTCTT	CGTCAACAGA	GCGGAAGTTA	5460
GCAAAGAAGG	CATTCAAGCG	GGCACCAGAA	CCTGTGCGAG	TTTTCTTAAG	ACTGCGGTCA	5520
TATTTTCTCT	GAACAGTTTC	TTCTGTTTGA	GGAGCTTCTG	GTTCAAGCAC	TTCAGAATTA	5580
TTTTCTTCTA	CAGTTCCTTC	GTGCTCAAGC	TTCTCTTCCT	CTGGTAATTC	TTCTGAGTTT	5640
GGTAATTCCT	CTATTTCTTC	TTGAGAAACC	CCTACAGCTG	GCTCTGAATC	CTGACTTTCT	5700
TCAACTGTGT	CTTGGATTTC	CTCTTCTTGG	AACACAGCTT	GTTCAACAAT	TTCAACCTCT	5760
GCTTCTTCCT	GAGAAACTTC	CTCAACTTCT	GTGAAGGTAG	GATCAACATC	TTCAGACAAA	5820
TCAAGATTTT	CCAGAGCTTC	TTTTACAAC	TCTTCGATT	TAGGTTCTTC	TTTTTTTCCG	5880
AATAGACGGT	CAAACAATCC	CATATCTTAG	TTCTCCTTTA	GCACATATTC	TTCGATAGCC	5940
CAGGCGACAG	CTTCCTCATC	GTTGGTCATC	GGCGTCACTA	CATTTGCGGC	TGCCTTTACT	6000
TCAGGAACAG	CGTTTTGCAT	AGCAACACCA	AGACCTGCCC	ATTCAATCAT	AGAGAGGTCA	6060
TTGGCCTCGT	CACCACAAGC	CATCACTTGA	CTTTGGTCGA	TTCCAAGATG	GCTGATTAGT	6120
TTTGCCAAAC	CTGTTGCTTT	ATGAACATTC	TTTGGTGACC	ATTCTAGCAA	CATTTACGCT	6180
GATTTAAAGA	TTTCATATTG	GTCAAACAAT	TCTGGAGAAA	TCTTCTGAAT	GGCTGCATCC	6240
AAGGGTTCTT	GAGCAAAGGC	AGTCACGCAT	TTGTTGTAGG	TCATTTGACT	AGATAAGTCT	6300
TCAAAGTCCA	CTGGAACAAA	GGTCAAAGCT	GGATTGAATT	TGGCATAAAG	ACTTTCTTGG	6360
TCCGATTGGA	TTTGATAAAC	TGTTCTTCT	GAGATGGCAT	CAAGAGGCAG	TGATAATTTT	6420
TCTGTTTCTT	CATACAAACG	TGCCACATCA	TCATATGAAA	AGACTGTTTT	ATCAAGGATT	6480
TCTCCTGTAT	TTTTCTGAAC	TAATCCACCA	TTAAAAGTAA	TGGTATACTC	ATCTTCCTGA	6540
CCGTCAGTCC	CTAACTCATG	GAGAAAGAAA	TCCATGGCTT	TTAAGGGACG	ACCAGTTGTC	6600
AATACGACCT	TGATACCACG	ATCACGCGCA	gCTTGCAAGG	TTTCCTTGGT	ACGATCCGTC	6660
AGCCTTTTAT	CAGTAGTCAG	CAAGGTCCCG	TCCAAGTCCA	ATGCAATCAA	TTTTATATCT	6720
GCCATTATAA	GCCCTCCATA	TAAGCTATAA	CCGACCGTTC	CTTATGGTGA	CCAATCACAG	6780
TCTTTGCTAA	TTCTAAAATT	TCAGGTCGTG	CATTTTCAGG	AGCTACAGGA	TGTCCCACAA	6840
CCTGCATCAT	ATGTAAGTCA	TTAAGATTGT	CTCCAAAAGC	CATGACCTGA	TCCATTGTGA	6900

873

TACCAAGTTT	TTTAACTAAT	TCAACAATGG	CCACTCCCTT	ATCGACATAG	TCCAGAACAA	6960
TATCAATGGA	TTCAAAGCCA	GTTGTCAATG	CCTTAACACC	AGGAACGTTT	TCGTTTACCC	7020
AAGCCTCCCC	ATCTTCCAGC	GTTTCTTCTG	TGAAGTTGGT	TGTAAATTTG	AAAATGTCAT	7080
CTGTGATATC	TTCCAAACTC	GCTACTTTT	GGATATTTTC	ATTATAGTGC	TGACTCACTT	7140
TCAAATAGGT	CTCATCAACC	GTATCTAGAA	CATATGAACC	CTTCTTACCC	GTCAAGAGCA	7200
GTTTATTGAT	ATCTACATAA	GGTGAAGTTT	TCAGCTTTTC	AAAAGTTGCC	AGATAAAAGT	7260
CACGAGACAT	AGTCGCTTCA	TACAAGTCCT	GACCTTGATA	CTCTACCAA	CTGCCATTTT	7320
CCGCGATGAA	AATAATGTCA	TCACGAACAC	CAGCAAATAA	TTTTTCTAGA	GACAGAAATC	7380
CCCGACCCGA	AGCTACCGCA	AAGTAAATCC	CTTTTTCCTT	GTAGGAAACC	AAGAGAGACT	7440
TGAGACGATC	CATATCAAAG	CGTCCATTCC	CATCTAGGAA	GGTCCGTCC	ATATCCGTTG	7500
CTACTAGTTT	AATTGTCATC	CTTCAATACT	TTCTAAATCT	TTTAACTTAA	CTGAAACAAT	7560
CTTTGAAACA	CCCGATTCTT	GCATGGTCAC	TCCATAGATG	GAATCAGCCG	CTGCCATGGT	7620
TCCCTTACGG	TGGGTACGA	CGATGAACTG	GCTGTCTTGG	TCAAAGCGGT	TGAGGTAATC	7680
CCCAAACGT	TTAACATTGG	CTTCATCCAG	CGCAGCTTCC	ACCTCATCCA	AGATAACAAA	7740
TGGAATAGTC	TTGACACGAA	TAATGGAGAA	GAGCAAGGCA	AGAGCCGATA	GGGCTTTTTC	7800
ACCACCACTC	ATGAGATTAA	GAGACTGGAT	TTTCTTGCCT	GGTGGTTGGA	CAGAAATTTT	7860
AACCCAGCT	GTCAGCAAGT	CTCCTTCAGT	CAAAATGAGG	TCAGCCTGAC	CTCCACCAAA	7920
CATCTGCTTG	AAGGTCACTT	TAAAGGACTC	ACGAATGACC	TCAAAGGTTG	ATTTAAAGCG	7980
TTCTTGACC	TCATCATTCA	TCTCTGTAAT	GGTCTCAAGG	AGCAGGTTT	TCGCAGACAA	8040
AATATCATCA	CGTTGGCTAT	TTAGGAAATC	CAGACGGTTG	TGAACTTCTT	CGTACTGTTT	8100
AATAGCGTCT	AAATTGACAG	GACCCAGTGA	GCGTATAGCC	TTCTCTAAAT	CCTTAACTTC	8160
TTGCTCTGCC	AGATTGAGAT	TTTCCAATC	ATGCGCCTTT	TCTAAAGCTT	CTGTGTAGCT	8220
GATCTGGTAC	TGGTCTGTTA	ATTGACTTTG	TAGATGGCGC	AAGCGCTCGC	TAACCTTTTC	8280
TTTCTTGGCT	TCAGCACGAG	TTTGCTTGCG	AATCCACTCT	TCATTCTGCT	GGCGAGCCTG	8340
ATCCAAATGA	CTAGCAATAT	CATCCAGTTG	ACCCTCAATA	TCATCCAACT	CAAATGCTT	8400
GCGAATCAAA	CCTTGTTGGA	GATTGTGTTT	TTGAGTTTGG	GATTCTTCCG	CCTGTTGACT	8460
GAGCAATTCT	GTATCAACCT	TCTCAAGATT	ATCAATCTTT	TCTTGAAGAA	GGCGCTGGAT	8520
TTCTCTTGT	TCAAATCAA	GATTGTCCAA	TTCTTGCCT	AAGCGTTCAA	TATCAGCAAC	8580
TTCATAACGT	TTTTGCCCTT	GCAGTTCTGT	CTTAAGCAAA	CGAGCTTGCG	CTAGCTCTTC	8640

874

CTGCAAGTTT	TGATAGCGTT	CTTGGATGGC	ATTTTGTGTTA	GACTTAATCT	CTTCAATCTC	8700
AGCTTCCAGA	TTTGTGCTTGT	CACTGGAGAT	TGCAGCAAGA	CGCTCTTGGC	AGTTTTCCTT	8760
ATCCGCTTGC	CAATCTCCCT	CGGAAAGACG	ATCTATTTCC	TCTTCTTGGA	GTTTCCAAAG	8820
AGTTTCCAGT	TCTTCAACTT	GCTGACTAGT	TTGCTGATAA	GCGAGGAACA	AGCCTTGCTC	8880
CTGAATACGT	GCCTGCTCTC	CTTGAGATTT	AATAGCTTCT	AATGACTCGG	TCAATCTGGC	8940
CATCTCATCT	TGCAAGGTCT	TCAAAGTCGC	CTCTTCTGAA	CCCAAGCTTG	CTTCTTCTTC	9000
AGCAATTTCT	TTTGTAAAT	GCTCCAGTTC	TGGCTTGATA	AAAATGCTGT	TATCTGCGG	9060
ATTGGCACCA	CCTGCATAAG	AACCACCTGT	GCGCAACTCT	GTCCCATCCA	ATGTCACCAT	9120
ACGAACCTGA	TAACGAACCT	GGCGAGCTGC	TGCACGCGCA	TGTTCTACGG	TATCAAAGAT	9180
AGCCGTCGTA	GCTAGCAAGT	TCTTGAAAAT	GGCTTCCAGT	CTAGTATCAA	AAGTCACCAA	9240
CTCATCTGCC	ATCCCAAGGA	AACCTGGGCT	TACAGCGATA	GCATCTTGGT	TCTGACTAGA	9300
AATCGTACGC	GCCTTGATAG	TGGTCAAAGG	AAGAAAGGTT	GCACGACCGG	CTCTGTTCGG	9360
TTTAAGGAAG	TCAATAGCCT	TGGTTGCCGA	CTCTTCATCT	TCTACGATGA	TATGCTGGCT	9420
ACTTGCCCCCT	AAGGCAATCT	CTAGGGCAGT	TTGATAATAA	ACATCAAAGG	TCAGATGCTC	9480
ACTGACTGCA	CCAATAATCC	CACCTAGGCG	ATCTTTTCT	TGGAGAACAC	TCTTAACACC	9540
TGCATAAAAG	TTACTATGAT	TTCTCAGGAT	ATTTTCCAAA	CTTTGAGCTC	TGGCCTGCCT	9600
GTTTTTGAGA	TTATCCAGAC	GGTCAAAGAG	TTGGCTTTGT	TGAGCTTGAT	AGGAAGTTTT	9660
CTGCTCCTCT	TGCTCCTTGG	CAATAGCTTG	GATGTCAGCC	AATAATTTCT	GAACCTGCTC	9720
CTTGGCAGTT	TCAAGCTCTT	CCTTTTGCTG	ACTAGCCTTC	TCTTTAGCTA	TAGCTAATTG	9780
CTCTTTCAGC	TTTTCTAGTT	GATCTGCTTG	TTTTTGAGAA	AGCTGACGAC	TATTTTCCAA	9840
CTCATTTCTCA	ATACGGGTCA	ACTGGTTTGA	GACATCCGCT	TCTTCTTGTA	AAAGAGCTAC	9900
AAAGCGTTCA	CGTAAGAGCT	CAATCATCTG	ATCAGGATCG	TCTGAGAAAG	CCAGCAATTC	9960
AGCTTCTAAA	CGATTGAGTT	TTTGATTATT	TTGGACTAGA	TTTCCCTCTA	ACAGAGCTAA	10020
AGAGCTTTCT	TTATCAGACT	TTTCTTTGCT	GAGTGAATTT	CTCTTATCCT	CCAAAGCAGC	10080
CAAACGGGCT	TGTGCCTCCT	GTTGATTCAA	GGCCACTTGC	TCGGACTCCA	GTTTCGATAG	10140
GGCTAATTTT	CTTTCTAAAT	CACTAATCAG	ACTAGTCAAG	TCCATCAAAC	TGCCTTGGTC	10200
TTTGGCCATT	TCAGCCTGTA	AATCTTGGCG	TTGCTTTTGA	AGAGTTTGAT	TTTCTTCTTC	10260
TAATTTTTC	CGCTTTTGGT	AATAACTCAT	CAAGAGTTCT	TGAACCTGAG	TCAACTCTTC	10320
TTCTGTGCG	TCTAGTTCAG	CCTTATTTTC	CTTGATTGTA	GCAACCAGAA	CATCTAAATA	10380
AATAGCCTTA	CGTTGTCCTT	CCAAGTCTAA	AAACTTACGG	GCATTCTCAG	CTTGCTTCTC	10440

875

AAGAGGCTTG	ATTTGATTAT	CCAACTCGTA	GATAATGTCC	TCTAAGCGGT	CCAGATTATC	10500
CTGAGTTTGC	TGCAGTTTAC	TCTCGGTTTC	TTTTCTGCGA	GTCTTGATTT	TTAAAACTCC	10560
AGCAGCTTCT	TCAAAAATAG	CTCGTCGTTT	CTCAGGCTTG	GAATTAAAAA	TCTCCTCAAC	10620
CTTCCCTTGG	GAAATAATAG	AGAAGGAATC	TCGTCCCAAT	CCAGTATCCA	AGAAGAGGTC	10680
ATGAATATCA	CGCAGACGGA	CTTCTTGCC	GTCAATCTTG	TATTCGCTAT	CTCCACTACG	10740
ATAGACATGG	CGTCCACCC	TGATTTCTTG	ACCTGCATCC	TTGATAAATC	CGTCATGATT	10800
ATCCAGAGTC	ACAACTACAG	AAGCATAATT	GAGCGGTTTG	CGACTTTCGG	TTCCAGCAAA	10860
GATGATATCC	GGCATCTTGC	CCCCACGGAG	ACTCTTGACA	CTAGACTCCC	CCAAAGCCCA	10920
ACGCAGACTT	TCTGTAATAT	TGGACTTTCC	AGATCCATTG	GGTCCAACAA	CTGCCGTCAC	10980
ACCTTGGTCA	AAAACGACCT	TGGTCTTATC	AGCAAAAGAC	TTGAACCCCT	GAATTTTCGAT	11040
TTCTTTTAAA	TACATGAATC	CAGCCCCTTC	TCAACGGCAT	TTTTGGCAGC	TTCTGCTCT	11100
GCTAATTCT	TAGAACGACC	TTGGCCTTGA	CCGATGCTCT	TACCTTCAAC	AAGAACTTCT	11160
ACATCAAAAA	CCTTATCGTG	AGCAGGCCCT	GTTTCAGAAA	TCACCTGATA	ACGAATAGCC	11220
ACATCACCAT	TGACCTGAAG	CAACTCTTGG	AGATGGGTTT	TATAGTCTGT	AATCATCTCA	11280
AACTCGCCTG	CTTCAACCTT	AGGAATCATG	ACTTGATAGA	TAAATTCCTT	GACCTTGGCC	11340
ACATCCTTAT	CCAAAAGAAG	GGCACCAAGA	AAGGCTTCAA	AGGCATCACC	AAGAATGGTG	11400
TCACGATGTC	GACCACCTGA	TTTTTCTTCC	CCTTTACCCA	ACTTGATAAA	CTGGTCAAAC	11460
TGGCAATCAC	GCGCAAAACC	AGCTAAACTC	TCCTCACGGA	CAATCATAGC	ACGGAGTTTT	11520
GATAGGTCAC	CTTCAGGCTT	TTTAGGATAT	TTTTTATATA	GATATTCTGA	AATCAATAAC	11580
TGTAGAACAG	CGTCTCCTAA	AAATTCCAAG	CGTTCATTGT	GTGAAATTTT	TAAGAGGCGG	11640
TGCTCATTTG	CATAACTCGT	ATGAGTAAAG	GCAGTTTCCA	GTAACCTTTT	GTCTGCAAAT	11700
TCGATTGCAA	AATGATTCTT	TAGTACAGTT	TGTAATTCTT	TCATACCAAC	CTCTTTCTAA	11760
CTGATAATAG	TCCTTTTTAT	TATATCAAAA	AAAGCCCCCT	GAGTCACTCT	AAAACGGGAC	11820
TGGAAAGCAT	TTGGGAATTC	TTTAGACAGA	GATTCTCAGT	TTTAGCGGCA	AATTTGGGTC	11880
AGGATAAAGA	AAAAAGCCCT	ATTAAAGGCT	TTTTAGGATG	TTTACATCCA	CCCTGAGGGA	11940
ATCGAACCCC	CATCTCAAGA	ACCGGAATCT	TACGTGATAT	CCATTACACT	AAGGGTGGAA	12000
ACTTGTTTTA	TTATAACAGA	AATTTGCTCT	AATAACAAAGT	TTTTTGGTCA	AAGACCCCGT	12060
CTTAGTGGGA	AGCATCCCCA	TTCCAGATGG	AGTTTTTCAC	GATCACATAA	TCAACGTGTT	12120
TAAGGTCAGC	AACCTGACGT	CCACCTGCAT	AAGAAATAGC	ACTTTGAAGG	TCTTGTTCCT	12180

876

TCTCAGTTAA AGTGTCTTGC AGATGACCTT TAGCAGGAAG CAAGATACGT TTGCCTTCCA	12240
CATTTTTGTGTA AGCACCTTTT TGATATTGTG AGGCTGAACC ATAATATTCT TTGAACTGTT	12300
CACCATCGAC TTCAATCGTT TTCCCTGGAC TTTCAATGTG TCCTGCAAAG AGGGAACCAA	12360
TCATGATCAT GCTAGCACCG AAGCGGATAG ACTTAGCAAT ATCACCGTGA GTACGAATTC	12420
CTCCATCAGC GATAATCGGT TTACGCGCAG CCTTGGCACA CCAGCGTAGA GCAGCCAACT	12480
GCCAACCACC TGTACCAAAA CCAGTCTTAA CCTTGGTGAT ACAAACCTTA CCAGGACCGA	12540
TTCCGACCTT AGTAGCATCC GCACCAGCAT TTTCCAATTC ACGCACAGCT TCTGGTGTTT	12600
CCACATTTCC AGCAATGACA AAGGTATCTG GCAATTCCTT CTTGATGTGT TGAATCATAG	12660
AAATCACGCT ATCCGCATGA CCATGAGCAA TATCAATAGT GATATACTCA GGAGTATCAG	12720
CCTTGAGCTG GCTAACAAAA TCATACTCAT AATCCTTAAC ACCGACAGAG ATAGAAGCAA	12780
TGAGCCCTTG ATTGTGCATT CGTTTAATAA AAGGAATGCG TCCTGCCTCA TCAAAACGGT	12840
GCATAATGTA GAAGTAACCA CCTTTAGCCA GTTGCTCTGC TACATTTTCA TCCAAAATCG	12900
TCTGCATATT CGCTGGCACA ACAGGTAGTT TAAAGGTGTG ATTTCTTAAA GTGACACTTG	12960
TATCCGCTTC TGCACGGCTT TTAATGACAC ATTTATTTGG AATCAATTGA ATATCTTCGT	13020
AATCAAAAAT TGGAAATTCA TTTAACATAT CGATGTCTCG TTTCTTTTGT AATGACCTAC	13080
CTATGCTCTT GCATCACTAC GCCTTTTCCG ACGTTTCCTG G	13121

(2) INFORMATION FOR SEQ ID NO: 127:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9578 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

CCGAATGCAA TGTTTACGGT TGAACCTGAA AATGGACATC AGATTTTAGC AACAGTTTCT	60
GGTAAATTC GTAAAACTA TATTCGTATT TTAGCGGGAG ATCGTGTAC TGTCGAAATG	120
AGTCCATATG ACTTGACACG TGGACGTATC ACTTACCGCT TTAAATAATC GAAAACTTG	180
GAGGGATAAG AAATGAAAGT AAGACCATCG GTCAAACCAA TTTGCGAATA CTGTAAAGTT	240
ATTCGTCGTA ATGGTCGTGT TATGGTAATT TGCCCAGCAA ATCCAAAACA CAAACAACGT	300
CAAGGATAAG ATAGAAAGGA GAAAACATGG CTCGTATTGC TGGAGTTGAT ATTCCAAATG	360
ACAAACGCGT AGTAATCTCA TTGACTTATG TTTATGGTAT CGGACTTGCA ACATCTAAGA	420
AAATTTTGGC TGCTGCTGGA ATCTCAGAAG ATGTTCTGTG ACGTGATCTT ACATCAGATC	480

877

AAGAAGATGC TATCCGTCGT GAAGTGGATG CAATCAAAGT TGAAGGTGAC CTTCGTCGTG	540
AAGTAAACTT GAACATCAAA CGTTTGATGG AAATCGGTTC ATACCGTGGT ATCCGTCACC	600
GTCGTGGACT TCCTGTCCGT GGACAAAACA CTA AAAACAA CGCCCGCACT CGTAAAGGTA	660
AAGCTGTGTC GATTGCTGGT AAGAAAAAT AATATAGGAG GTAAAAGTCT TGGCTAAACC	720
AACACGTAAA CGTCGTGTGA AAAAGAATAT CGAATCTGGT ATTGCTCATA TTCACGCTAC	780
ATTTAATAAC ACTATTGTTA TGATTACTGA TGTGCATGGT AATGCAATTG CTTGGTCATC	840
AGCTGGTGCT CTTGGTTTCA AAGGTTCTCG TAAATCTACA CCATTCGCTG CTCAAATGGC	900
TTCTGAAGCT GCTGCTAAAT CTGCACAAGA ACACGGTCTT AAATCAGTTG AAGTTACTGT	960
AAAAGGTCCA GGTTCCTGGTC GTGAGTCAGC TATTCGTGCG CTTGCTGCCG CTGGTCTTGA	1020
AGTAACAGCA ATTCGTGATG TGAATCCAGT GCCACACAAT GGTGCTCGTC CTCCAAAACG	1080
TCGCCGTGTA TAATCATCGC ATTACACTGC TTTTCGTTTA AGAGGGAGTA ACTAAATGAT	1140
CGAGTTTGAA AAACCAAATA TAACAAAAT TGATGAAAAT AAAGATTATG GCAAGTTTGT	1200
AATCGAACCA CTTGAACGTG GCTACGGTAC AACTCTTGGT AACTCTCTTC GTCGTGTAAT	1260
TCTAGCTTCT CTACCAGGAG CAGCTGTGAC ATCTATCAAC ATTGATGGTG TGTTACATGA	1320
GTTTGACACA GTTCCAGGTG TTCGTGAAGA CGTGATGCAA ATCATTCTGA ACATTAAAGG	1380
AATGTCAGTG AAATCGTACG TTGAAGACGA AAAAATCATC GAACTGGATG TTGAAGGTCC	1440
TGCTGAAGTA ACAGCTGGTG ACATTTTGAC AGATAGCGAT ATTGAAATTG TAAATCCAGA	1500
TCATTATCTC TTTACAATCG GTGAAGGTTC TTCTCTAAAA GCGACTATGA CTGTTAACAG	1560
TGGTCGTGGA TATGTACCTG CTGATGAAAA TAAAAAGGAT AATGCACCAG TTGGAACACT	1620
TGCTGTAGAT TCTATTTATA CACCAGTTAC AAAAGTCAAC TATCAAGTGG AACCTGCTCG	1680
TGTAGGTAGC AATGATGGTT TCGACAAAT AACCCTTGAA ATCTTGACAA ATGGAACAAT	1740
TATTCCAGAA GATGCTTTAG GGCTTTCAGC ACGTATTTG ACAGAACATC TTGATTTGTT	1800
TACAAATCTT ACTGAGATTG CTAAGTCAAC TGAAGTGATG AAAGAAGCTG ATACTGAATC	1860
TGACGACCGT ATTTTAGATC GTACGATTGA GGAACCTGGAC TTGTCTGTGC GTTCATACAA	1920
CTGTTTAAAA CGTGCCGGTA TCAATACTGT GCATGATTTG ACAGAAAAAT CTGAAGCAGA	1980
GATGATGAAA GTACGAAATC TTGGACGCAA GAGTTTGGA GAAGTGAAAC TCAAATCAT	2040
TGATTTGGGT CTTGGATTAA AAGATAAATA AAGGAGGAAT ACATGGCTTA CCGTAAACTA	2100
GGACGCACTA GCTCACAACG TAAAGCAATG CTTGCGGATT TGACAACTGA CCTTTTGATC	2160
AACGAATCAA TCGTGACAAC TGAAGCTCGT GCTAAAGAAA TCCGTAAAC TGTTGAAAAA	2220

878

ATGATTACTC	TAGGTAAACG	TGGTGATTTG	CATGCACGTC	GTCAAGCAGC	TGCTTTCGTA	2280
CGTAATGAAA	TCGCATCTGA	AAACTATGAT	GAAGCAACTG	ATAAGTACAC	TTCTACTACA	2340
GCACTTCAAA	AATTGTTCTC	AGAAATCGCA	CCTCGTTATG	CTGAACGTAA	CGGTGGATAC	2400
ACTCGTATCC	TTAAAACTGA	ATCACGTCGT	GGTGATGCAG	CGCCAATGGC	GATCATCGAA	2460
TTAGTATAAA	ATCATCAATT	TTGTTGAGTG	TTATGATGAT	GGAGTCTTGT	GCTCTTAGTC	2520
TAGCTCTGGT	CTACCGCTAG	GATTTCGGTC	CTAGCGGGAA	CACTCATCAT	AAGTTGGGAT	2580
AGTAGACGCT	TGTTTACGAA	ATTGTTTTTT	TCTTAAGAAC	AAC TTCGTAA	GCAGGCGTTT	2640
TTGAGTATTT	TCGTTAGAAT	TATGCTATAC	TATTTGAAAA	GAATCCTGTT	TAATGTTAAG	2700
GTTTCTTAT	TTAAGAAGAA	TTGGAGTTTA	CTTATGAAAG	CCATTATAAC	TGTTGTGGT	2760
AAAGATAAAT	CTGGAATTGT	TGCAGGTGTT	TCTGGTAAAA	TTGCAGAATT	AGGATTGAAT	2820
ATTGACGATA	TCTCTCAAAC	TGTCTTGGAT	GAATATTTTA	CGATGATGGC	TGTTGTATCT	2880
AGTGATGAAA	AGCAAGATTT	TACCTATCTT	CGTAATGAAT	TTGAAGCTTT	TGGGCAAACT	2940
TTGAATGTAA	AAATCAATAT	TCAGAGTGCA	GCGATTTTCG	AAGCTATGTA	TAATATCTAG	3000
GAGGTCATCA	TGGATATTAG	ACAAGTTACT	GAAACCATCG	CCATGATTGA	GGAGCAAAAC	3060
TTCGATATTA	GAACCATTAC	CATGGGGATT	TCTCTTTTGG	ACTGTATCGA	TCCAGATATC	3120
AATCGTGCTG	CGGAGAAAAAT	CTATCAAAAA	ATTACGACAA	AGGCGGCTAA	TTTAGTAGCT	3180
GTTGGTGATG	AAATGCGGC	TGAGTTGGGA	ATTCTATCG	TTAATAAGCG	TGTATCGGTG	3240
ACACCTATTT	CTCTGATTGG	GGCAGCGACA	GATGCGACGG	ACTACGTGGT	TCTGGCAAAA	3300
GCGCTTGATA	AGGCTGCGAA	AGAGATTGGT	GTGGACTTTA	TTGGTGGTTT	TTCTGCCTTA	3360
GTACAAAAAG	GTATCAAAA	GGGAGATGAG	ATTCTCATCA	ATTCCATTCC	TCGCGCTTTG	3420
GCTGAGACGG	ATAAGGTCTG	CTCGTCAGTC	AATATCGGCT	CAACCAAGTC	TGGTATTAAT	3480
ATGACGGCTG	TGGCAGATAT	GGGACGAATT	ATCAAGGAAA	CAGCAAATCT	TTCAGATATG	3540
GGAGTGGCCA	AGTTGGTTGT	ATTCGCTAAT	GCTGTTGAGG	ACAATCCATT	TATGGCGGGT	3600
GCCTTTCATG	GTGTTGGGGA	AGCAGATGTT	ATCATCAATG	TCGGAGTTTC	TGGTCTCGGT	3660
GTTGTGAAAC	GTGCTTTGGA	AAAAGTTCGT	GGACAGAGCT	TTGATGTAGT	AGCCGAAACA	3720
GTTAAGAAAA	CTGCCTTTAA	AATCACTCGT	ATCGGTCAAT	TGGTTGGTCA	AATGGCCAGT	3780
GAGAGACTGG	GTGTGGAGTT	TGGTATTGTG	GACTTGAGTT	TGGCACCAAC	CCCTGCGGTT	3840
GGAGACTCTG	TGGCACGTGT	CCTTGAGGAA	ATGGGGCTAG	AAACAGTTGG	CACGCATGGA	3900
ACGACGGCTG	CCTTGGCCCT	CTTGAACGAC	CAAGTTAAAA	AGGGTGGAGT	GATGGCCTGC	3960
AACCAAGTCG	GTGGTTTATC	TGGTGCCTTT	ATCCCTGTTT	CTGAGGATGA	AGGAATGATT	4020

GCTGCAGTGC	AAAATGGCTC	TCTTAATTTA	GAAAACTAG	AAGCTATGAC	GGCTATCTGT	4080
TCTGTTGGAT	TGGATATGAT	TGCCATCCCA	GAAGATACGC	CTGCTGAAAC	TATTGCGGCT	4140
ATGATTGCGG	ATGAAGCAGC	AATCGGTGTT	ATCAACATGA	AAACAACAGC	TGTTTCGTATC	4200
ATTCCTCAAAG	GAAAAGAAGG	CGATATGATT	GAGTTTGGTG	GTCTATTAGG	AACTGCACCC	4260
GTTATGAAGG	TTAATGGGGC	TTCTGCTGTC	GACTTCATCT	CTCGCGGTGG	ACAAATCCCA	4320
GCACCAATTC	ATAGTTTTTA	AAATTAAGAA	AATAGGAGAA	ATTTTAAGTT	CTATTTAAGA	4380
TTAGACGTGT	ATACTATAAT	CATTAAATAA	AGACCTCCTA	ATATTATTTG	AAACAGATAA	4440
CACTGAATTA	GTTTGAATTT	GATTTTCATC	TAATATCTTT	ATTTAATGAA	CTCCTAAACT	4500
TTTTCATAAT	AATCTCCTTC	AAAAGTCGCC	TGTATGGGTG	GCTTTTATTT	TATCATTCAT	4560
GATATAATAG	AAGCAAACGG	AGGACGGAAA	ATGGTAAAG	TACGATTGTA	TTTGGTACGT	4620
CATGGCAAGA	CCATGTTTAA	CACGATTGGT	CGCGCGCAAG	GTGGGAGCGA	TACTCCCTTA	4680
ACTGCTGAAG	GTGAACGAGG	GATTCAAGAG	TTAGGAATCG	GTTTGCAGAG	ATCTGATCTA	4740
CAGTTTGAGC	GTGCTTATTC	GAGTGATTCT	GGTCGTACCA	TTCAGACCAT	GGGAATTATC	4800
CTTGAAGAAC	TTGGCTTGCA	GGGGGAAATC	CCTTATCGCA	TGGACAAGCG	TATCAGAGAA	4860
TGGTGTTCG	GTAGTTTGA	TGGAGCCTAT	GATGGCGATC	TTTTTCATGGG	CATTATTCTT	4920
CGTATCTTTA	ATGTGGACCA	CGTTCACCAA	TTGTCTTATG	CTGAACTGGC	TGAGGGCTTG	4980
GTAGAGGTCG	ATACAGCTGG	TTGGGCTGAA	GGCTGGGAAA	AACTCAGTGG	CCGAATCAAG	5040
GAAGGCTTTG	AAATGATTGC	AAAAGAAATG	GAAGATCAAG	GTGGAGGTAA	CGCCCTTGTT	5100
GTCAGCCATG	GAATGACTAT	TGGAACCATT	GTTTATCTGA	TTAATGGCAT	GCATCCGCAT	5160
GGTCTGGATA	ATGGTAGCGT	GACAATCCTT	GAATATGAGG	ACGGCCAGTT	TAGGGTTGAA	5220
GTTGTCCGGT	ACCGTAGTTA	CCGAGAGCTA	GGACGTGAGA	AGATGGAAGA	AGGCTCTATT	5280
TAATCAGTCT	AGACTTGCTT	GCCATGAGCT	AGGGATTTGA	TAAGAATATC	AAGATAAGAA	5340
AAAACAGCCG	AGGGCACTCC	TTTCGGCTGT	TTTTGATGTG	GAAAACTAAA	GTGTAATGCT	5400
ATGCTTTTCA	GAGATTTTCA	TAAACAAGAG	CAAGGAACCT	ACTGTTAGAA	CAGTCAGGAT	5460
AGTTGACAAG	GTTGCGGCTA	CACCGTAATT	TCCTCTGAGA	ACCTCTGTAT	AAATAGCTAC	5520
AGTCATTGTT	CTTGTTTGA	CATTGTAGAG	GAGGATAGAA	GTAGAGAGTT	TTGAAATCAT	5580
TGTGACTCAA	GATAAGATGG	CTCCAGAAAT	GATACCAGAT	AGCATCATTG	GAGTTGTAAT	5640
CTTAGCAAAG	GTATGAGAC	GACTACTTCC	TAAGCTTTCA	GCAGCTTCTT	CAATACTTGG	5700
TGCTATTTGT	TGTAAGCTAG	CAACAGATGA	GCGAATAGTA	TAAGGTAATC	TTCTGGCAGA	5760

880

TAGAGACATA	ATCAAGATGA	AAGCAGTCCC	TGTAATCATA	AGAAATCCAC	TTCCAAATAG	5820
ACCAGTATTG	AAGGAAGAAA	TGAAGGCAAT	CCCTAGAACG	GTTCCCTGGTA	CAATATAAGG	5880
TACCATACTG	AGGCTGTCAA	TTAAGTTTGT	AAACAAATTC	CGTTTTCTAA	CGGCTAGGTA	5940
GGAGATAAAT	GTCGCAAATA	GAACAACTAG	AACTAAGGCA	ATCAAAGGGA	TACGAATGGT	6000
ATTGAAAATA	GCAGATCCCA	TACGATGGAA	AGCTACCTTG	TAACTGTTTG	GAGAATAACC	6060
TTTAACAGAT	ACCATACCTG	ATGTTTTTAG	GAAAGAGGTA	TAAATTAAGT	AGATTTGAGG	6120
TAAAACAGAG	ATAAAGATAA	TTCCGTAGAC	TGTTGCATAA	ATGGCAGCCA	TTTTTCCTTT	6180
TGTAGTTTTT	TTAGGCTCAA	TTGGATGGAG	CAGATTCATG	CTGAAACTGT	AGCGGTTTGC	6240
AATGTGTTTT	TGGATAAGGA	AAATTGCCAA	GGCAATGATA	ATCGCCATAA	TTGCAAAAGC	6300
AGAATTTCCCT	CCAACCTCGC	TAATAAATTG	GGTATAAATC	AGGACAGGGA	AAGTCCGATA	6360
CCCTTCGCCA	ATCAACATAG	GCGTTCCAAA	GTCTGAGAAT	GCTCTCATAA	ATACAAGCAA	6420
GGAGCTGCTA	GTAAGGTTGG	AACTAGGAGA	GGTAAAACAA	CCGTTACGAT	AGGTTTAAAT	6480
CCGAAGGACC	CCATGCTTTC	AGCTGCTTCA	AGTAGAGAAT	TGTCAATACT	GTTCATTGTT	6540
CCAGCAACAT	ATAGAAATAC	CAGTGGAAT	AGTTGCAGTG	TAAAGACAAG	TACAATTCCCT	6600
TTGAATCAAT	AAATATCGAT	AGCTGGAAGA	TAAAGGGCAT	TTGTCAAAAA	TTTAGTGATG	6660
ACCTCATTTT	GTCCTAGCAA	GAGAACCCAG	GAGTAGGCTC	CTACGAAAGG	AGCTGACATG	6720
GAAGCAATGA	TAATCAATAT	TTGTAGAAAT	TTCTTCCCCT	TGAAGTCATA	CATAGAGAAG	6780
AGATAAGCTA	ATAGGGTTCC	TACAACTAAG	GAAGTGATAG	TAGCGGTAAT	GGAAACCTTG	6840
AAACTGTTGA	CTAGTGCTC	AGAGTAGTAG	GCTTTACTAA	AGAAAGTGAC	AAAATTAGCT	6900
AGTGAGAATT	GTCCTTCATG	TATAAGTGCT	TGCTTGAGCA	CGGTAACGAT	AGGATAAACG	6960
AGAAAGATAG	GATAGGTAAG	AAAGAGGAAG	AAAGAGGAAA	CTGTCCAAAT	ATTTAGTTTT	7020
TTACGTTCCA	TGGTTGACTC	CTTTTATCAG	GTTTTGGGAA	CCATCTGCAG	AAAAGATGTT	7080
TAATTTTTGC	GTATTGATTG	GTAGACGAAT	ACGATTGCCT	TTTTGTAGAT	CTTCTTCAAA	7140
AGTTGATTCT	TACTAACTT	GAATTTTTGA	GGCAAAACCT	GTCTCAATGA	AATAATCCGT	7200
ATTTAGTCCA	AGATAGACGC	TATCTCTAAT	AGTTCCTTCA	ATATCTCCAG	ATTCATCTTT	7260
GATAAACTCT	TCGGGACGAA	TGCTTACATG	AATAGCTTGC	TCCTCAACCT	GATCAAGAGC	7320
TGGCATTCGA	AGGGCATAGC	CATCTGAAAA	GACGATATAA	GCGCCGTCGC	TCCGTTTTTC	7380
AAGATTGGCA	GGGATAATAT	TTGTGCGTCC	GATAAAGGTT	GCCACAAACT	CATTAGCTGG	7440
TTTATGATAG	AGTTCTTTTG	GTCGGCCGAT	TTGTTGGATC	ACCCCATCTT	TCATAACAGC	7500
AATTTGGTCT	GAAATAGCCA	TGGCTTCTTC	TTGGTCGTGG	GTTACATAAA	CAGTTGTAAT	7560

881

TCCCACCTTCG	TGTTGGATTT	CTCGGATGGC	TTGACGCATA	TCCAAGCGAA	GTTTGGCCTC	7620
CAGATTACTA	AGTGGCTCGT	CCATGAGGAG	AACACTTGGA	TTAACCGCTA	AGGCCCATGC	7680
CAAGGTGACA	CGTTGTTGTT	GTCCACCACT	GAGTTTATCG	GGCTTTCGAT	CCGCATATTG	7740
AGCAATTGTC	ATGAGTTCAA	GATACTTGTT	GGTCTGTTGA	ATCAATTCTT	CTTTTGGAAC	7800
CTTCTTTTGC	ATAAGACCAA	AAGCAACGTT	GTCTCGGACA	GTCAAATGTG	GGAAAATAGC	7860
GTAGTTTGG	AAAACCATCC	CGATATTGCG	TTTGCTGGGT	TCCATATTAT	TGATTTTGT	7920
ATCATCGAAG	TAAAATTCTC	CACCTTCGAT	ACTGTTGAAA	CCTGCAATCA	TACGAAGAAG	7980
GGTCGTTTTC	CCACATCCTG	AAGCTCCAAG	AAGGGTAAAG	AGACTTCCTT	TTGGAATTGT	8040
AATGTTCAAA	TTCTCAATAA	CAGGGACATC	GTGGTAGATT	TTTTTGCGGT	TAATAATTTT	8100
GATCTCACTC	ATAGTGAACC	TCTTTTACTG	TTTAGATTGG	ATATCTGTAA	AGACTTCGTT	8160
GTTTTCTTA	ACGATATCTG	ATTTATTCTT	GATGACATAA	TCATAATCTT	CAGTGAGTGT	8220
TTTGATTTTG	TCAATTGGTT	TCATGTTTTC	GCTTGTTTTA	GCATTTTTAC	GAACAGGACG	8280
GTTAGTAGTG	GTTGTACCAA	GTGTATCTTG	TACTTCTTGA	GAGATAATAA	AATCGATAAA	8340
TTTCTTGGA	TTTTCCATAT	TTTTAGATTT	TTTAACGATA	GCAGCACTAG	CAGGTAGGAA	8400
GACGGTTCCT	TCTTTTGAT	AGACTACCTT	AATGTTAGCT	CCGTCATTTA	AGAGTTTAA	8460
TGCTGGATCT	TCATAAGAGA	GACCAACAGC	CATTCTCCA	TCAGCGACTA	CTTTATAGAC	8520
ACTAGATGAA	CTTGAACCGA	TTTTACCATC	AATAAGTGTG	AAAAGATCTT	TTACATAAGA	8580
CCAAGCCTTA	TCATCTTTGT	AACCACCTTG	AGCTGTAGC	ATATTTGTTA	ATTGAGCAAA	8640
GGCGCTAGAA	GAGTTTGCTG	GGTCAGCAGT	TGCGATTTTT	CCTTTTAGTT	CAGGTTTGAA	8700
AAGATCGTTA	TATCCTTCGA	TGTTCATGCC	TTTAGTTAAA	TCAGGGTTGA	CGATTAAAA	8760
ACTACCATCT	AGTGATAAG	GAGTAGAGTA	GCCAGTTGTG	TTTTGATATT	CTTTGATAAC	8820
ATTATCATTT	TCTTTTGAAG	TATAGTTTTC	AAAGAGTTCT	CCGTGGGTAG	TATATTGTGT	8880
ATAAGAACCA	CCAAAGATAA	CATCAGCTAC	AGGAACTTCT	TTTTCTGACT	CTAGTTTTTT	8940
GAAAAGTTCT	CCAGTACCAG	CTTGAATCAG	TTCTACTTTG	ATACCATATT	TTTCTTCAAA	9000
GGCAGGAATA	GTTGCTCCAA	TTAAGCCCTC	TGAGTTTGGT	GAATAAACGA	CTAGCGAACC	9060
GGCGTCTCCT	TTATCAGATG	AACTGTCATC	GGCAGATTCA	TTAGAAGAAC	AAGCAGCATA	9120
ATACATCCAT	TTCTTTTCA	TGATGGATAC	CTCCGTTGTG	TTATTTAAGT	TTATTTTAAA	9180
ACAATGTAAG	CGTTTTTAAA	ACATACAATT	CTATTCTATA	GTGTATTGAA	TCTATAACAG	9240
TACACTTTGA	CTGCTAAAA	ATTTCTATAA	ATTAATTTGA	CTTTCCTGAT	AGAGATGTTC	9300

882

ACATCTTATT TCAATTCAC	ATATTAGAGT AAAATTCTCT	ACAAAAAGAA GAATAGCCTA	9360
TTTTACTATT CTTCTGAGTG	ATTTCAATTC CTTTGGGGAA	ATATGGAGAT ACTTTTTAAA	9420
TCCTGACAAA TGGTTGTTTC	TTTTTCTAAA TCGGTGATAC	TGTATCGGAG AATGCGCGTG	9480
AGGTCACAAA GGCTGCGATA	GAGCTTCTAT GGAGAATTTC	TTTTTGGAGA GATTTTTTAA	9540
AGGAATGAGA CATCCGCTAC	CTCCTTGGA GGTTTTTG		9578

(2) INFORMATION FOR SEQ ID NO: 128:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 13440 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

CGGGCTGTTG TGACGATTCT	TATTTCTATC TGTGTTATCT	TTTTGGGAAC TATTTTGGGT	60
GTGTCTTGG CTTTGGGCA	ACGTTCAAAG TTTAAACCGC	TGTTTGGTT GGCCAACTTG	120
TACGTTTGA TTTCCGTGG	GACACCGATG ATGGTTCAAA	TTATGATTGC CTTTGCTCTT	180
ATGCATATCA ATGCTCCGAC	TATTCAGATT GGAATTTTAG	GTGTTGATTT TTCGCGTCTG	240
ATTCCAGGGA TTTTGATTAT	CTCTATGAAT AGTGGTGCTT	ATGTTTCGGA GACTGTTTCGT	300
GCCGGAATCA ATGCGGTTC	AAAAGGTCAG CTAGAAGCGG	CTTATTCGCT AGGGATTTCG	360
CCTAAAAATG CGATGCGTTA	TGTGATTTTG CCACAAGCAG	TCAAAAAATAT CTTGCCAGCA	420
TTGGGGAACG AATTATCAC	CATTATCAAG GACAGCTCCC	TCTTATCAGC TATTGGGGTC	480
ATGGAGTTGT GGAATGGGGC	TACAACAGTT TCTACAACAA	CCTATCTACC TTTAACACCA	540
CTTTTATTTG CAGCATTTTA	CTACTTGATT ATGACCTCTA	TTCTGACAGT AGCCTTGAAA	600
GCTTTTGAAA AACATATGGG	ACAAGGAGAT AAGAAATAAT	GACAGAAACC TTGATAAAAA	660
TTGAAAATTT ACATAAATCC	TTTGAAAGA ATGAAGTATT	GAAGGGCATC AACCTCGAGA	720
TTAAAAGAGG AGAAGTTGTC	GTTATCATCG GTCCTTCAGG	GAGCGGGAAA TCTACCTTGC	780
TTCGCTCTAT GAATTTGTTG	GAAGAAGCAA CCAAGGGGAA	GGTTATCTTT GAGGGAGTCG	840
ATATTACGGA CAAGAAGAAT	GACCTGTTTG CCATGCGTGA	GAAGATGGGC ATGGTTTTTC	900
AACAATTCAA TCTCTTTCCT	AATATGACTG TGATGGAAAA	TATCACCTTG TCCCCTATCA	960
AGACCAAAGG TGACAGTAAG	GCCGTTGCAG AGAAAAGAGC	TCAGGAACCT TTGGAAAAAG	1020
TTGGTTTGCC AGATAAGGCA	GACGCTTATC CACAGAGTTT	GTCAGGTGGC CAGCAACAGC	1080
GGATTGCCAT CGCGCGTGGG	TTGGCTATGG AACCAGATGT	TTTGCTCTTT GACGAGCCAA	1140

883

CTTCAGCCCT AGATCCTGAG ATGGTTGGAG AAGTTCTGGC TGTTATGCAA GATCTAGCCA	1200
AGTCAGGAAT GACCATGGTT ATCGTAACAC ATGAGATGGG ATTTGCCCGT GAGGTGGCAG	1260
ATCGTGT CAT CTTTATGGCA GACGGTGTGG TTGTTGAAGA CGGAACACCT GAGCAGATTT	1320
TTGAACAAAC CCAAGGACAA AGGACTAAAG ACTTCTTGAG TAAGGTTTTA TAAGTTAGCT	1380
TTGTTTAGCT ATTTGTAGCC AGCTTTAAAC GTTAAAGAGA AGATTAGTGA AAAGCTCAAC	1440
CAGAGCTTTT TCTTATAGTT TAAAGCTATA GGATTGCCTA GGAAAGAAGT GTTAGAGCTA	1500
CATTGTATTT TTTGGTATAA TTAAAGATAT TTGTAAGAAA AGAGAAGTGA TATGACACAG	1560
ATTATTGATG GGAAAGCTTT AGCGGCCAAA TTGCAGGGGC AGTTGGCTGA AAAGACTGCA	1620
AAATTAAAGG AAGAAACAGG TCTAGTGCCT GGTTTGGTAG TGATTTTGGT TGGGGACAAT	1680
CCAGCCAGCC AAGTCTACGT TCGCAACAAG GAGAGGTCAG CCCTTGCGGC TGGTTTCCGT	1740
AGCGAAGTAG TACGGGTTCC AGAGACCATT ACTCAAGAGG AATTGTTAGA CCTGATTGCT	1800
AAATACAATC AGGATCCAGC TTGGCATGGG ATTTTGGTTC AGTTGCCATT ACCAAAACAC	1860
ATTGATGAAG AGGCGGTTCT ATTGGCTATT GACCCAGAAA AGGATGTGGA TGGTTTCCAT	1920
CCTCTAAACA TGGGGCGTCT TTGGTCTGGT CATCCAGTCA TGATTCCTTC GACACCGGCA	1980
GGAATTATGG AAATGTTCCA TGAATATGGG ATTGACTTGG AAGGTAAAAA TGCAGTCGTC	2040
ATCGGTGCGAT CCAATATTGT CGGAAAACCT ATGGCCAGC TTCTTTTGGC AAAGAATGCA	2100
ACAGTAACCT TGA CTCACTC ACGTACTCAT AATCTTTCCA AGGTGGCTGC AAAAGCAGAT	2160
ATTCTGGTTG TTGCAATCGG TCGTGCCAAG TTTGTGACTG CTGACTTTGT CAAACCAGGT	2220
GCGGTAGTCA TTGACGTTGG GATGAACCGC GATGAAAATG GTAAGCTCTG TGGGGATGTT	2280
GATTATGAGG CGGTTGCCCC ACTTGCTAGC CACATTACGC CAGTCCCTGG AGGTGTCGGT	2340
CCTATGACCA TTACTATGCT GATGGAGCAA ACCTATCAGG CAGCACTTAG GACATTGGAT	2400
AGAAAATAAG ATAAAAATTT TCTGAGGAAA GTGTATTTTC TATAGCTATA TCTAAAATGA	2460
TAGAAATGAA TATTAAATTT TAGAAATAAG TTTATAAAAG GAGGTTTGCG CCTCCTTTTT	2520
GTGTGATAAT GGAGTGAGGT GATTAGATGA TTTTAAAAAT TTATAATGGG GAATATAGTT	2580
TACAAATGGGA TGGAATATAC TACTTAGCAC TAATTGATTA TCCAAATATT CAAGAGTGGG	2640
AATTAGAAAA AATTGCTAAA TTTATAGCTT ACGAAAACT TCATAAACGT CAAACAAGTA	2700
TTGAGTGTGC TGATTCTTGT TTAAAAAAG AAATTTTAGA TTACATCTGT CAGCATCCCT	2760
TTCTGCCACC ATTTACTCCT ACAGATAAAA GAGTAGCCTC GACTTATGAC CTACATAAGA	2820
GGTTAGTGAC TTCAGACTAC TGTAGTCATA CTACGACTAT AGATGCAGCG ATTTCTATTT	2880

884

TTAAACTGG TCGTCTTTTA TCTGCTGTGA AAGCCTTTGG GCGAGATGCT GAGGAGTTGG	2940
TTTTGGATAG TCGAAATGCT GCATCTGATC CGATAGATTA TTTTGACTAT GTCATGTTAG	3000
GGTGGTCAAA TACAAGTTCT GGTATTCGAT TGGCGATGGA GCGTTTATTA GGTCGAGCTC	3060
CTTCAGAGAA AGAATTACAA GACAAGTTTA TTCCTGGAGT AAGTTTTCAT TTTATCTATA	3120
CAGATTTGAT TAAAGTTCCT GGTATATTTT TTGATGGTTA CCATGCTGTA AAAATTAAGG	3180
ACATGCTTAA TTTATTAAAGT GAGTTGTATA TTTGCATTAT TCCAACATCAT AATAAGAGCC	3240
AATTTGAAAA TATTATTCCA ACCAAAATAC AAGATAGGGT GTATTATCTT GACTATGCTG	3300
GAGAAGACTT AGAAGAGTGG ACTAAGAAAG TCTATCAAGT TGTTTTAAAA CAATCAGATA	3360
AAGGATAGTT GAGGAAAAAA CGATGAAAGT GATTGATCAA ACCTTACTAG AAAAAGTCAT	3420
TATTGAACGT TCTTGTACAA GTCATAAAGG AGACTACGGT CGTCTGCTGT TGCTTGGTGG	3480
GACTTATCCT TATGGTGGTG CCATCATCAT GGCTGCTTTA GCAGCTGTAA AAAGCGGTGC	3540
AGGATTGGTA ACCGTGGGAA CGGACAGGGA AAATATCCCT GCTCTACACA GCCATTTGCC	3600
TGAGGCTATG GCCTTTTCTC TGCAAGATCA GTAATTGTGA CAAGAGCAAT TGGAGAAGGC	3660
AGAAGTTGTC TTGCTGGGGC CTGGTTTACG AGACGATACG TTTGGAGAAA ATCTTGTA	3720
ACAGGTCTTT GCTAGCTTAA AAAAGAATCA GATTTTGATT GTAGATGGAG GGGCCTTAAC	3780
CATCCTTGCT AGGACAAGTT TGTGTGTTCC ATCTAACCAG CTTATCTTAA CTCCTCCCA	3840
AAAAGAATGG GAAAACTGT CTGGTATGTC TATTGAAAAG CAAAACGAAG GTACAACATC	3900
TAGTGCCCTG ACTTCTTTCC CTCAAGGAAC AATTTTGGTA GAGAAAGGTC CAGCTACTCG	3960
TATTTGGCAA GTTGGCCAGT CTGATTATTA CCAGTTAAAG GTTGGCGGTC CCTATCAGGC	4020
GACTGGTGGT ATGGGTGATA CACTGGCTGG AATGATTGCA GGATTTGCAG GCCAATTTG	4080
ACAGGCCAGT CTCTACGAAC GTGTGGCAGT AGCAACCCAT CTTCAATTCAG CCATAGCCCA	4140
AGAACTATCT CAAGAAAAT ATGTGGTCTT GCCGACGGAA ATTAGTAATT GTCTTCCTAA	4200
AGTAATGAAA AGATATGTCT AAAATAGTTA GACAAAAAT GTTGATAATT TGTATCATTA	4260
TTCTTAATTC ACAAAAAACG AACGTTTAGT ATTCTTCTTG CTAAGAAACT AAATTTGTTC	4320
GTTTTTTTAC TCTTGTAAT CTATTTTGT TAGAGTTGAT TTGGTTTACA TCCGTACTTA	4380
AATTGATTG TTAGAGCTCT ACTTTTATTA AAAAAATTCA ATTTCAAGGA TAAATAAGCA	4440
GTATTCTAAA GGTACTTTTA GATGAAATAA AAGCCTTTAC ATGGTATAAT AGAGGTAGCT	4500
CTTTAATGGA GGTGTTTGAG TGGAAAATCT GAAGAAAATG GCAGGTATCA CGGCTGCTGA	4560
ATTTATCAAG GATGGGATGG TTGTAGGCT AGGAACAGGT TCTACTGCCT ATTATTTTGT	4620
CGAAGAAATC GGTGTCGAA TCAAGGAAGA AGGCTTGCAG ATTACAGCTG TGACGACTTC	4680

885

TAGTGTGACC AGTAAACAGG CTGAAGGGCT CAATATCCCG CTCAAGTCTA TTGACCAAGT	4740
AGACTTTGTC GATGTGACAG TCGACGGGGC GGATGAAGTG GATAGTCAGT TTAATGGAAT	4800
CAAAGGCGGT GGTGGTGCCC TTCTCATGGA AAAGGTGGTC GCAACACCAT CAAAAGAATA	4860
CATTTGGGTG GTGGATGAAA GCAAGCTGGT CGAAAACTA GGTGCTTTTA AATTGCCAGT	4920
AGAAGTGGTT CAGTATGGTG CAGAGCAGGT CTTTCGTCTT TTGAACGAG CTGGCTACAA	4980
ACCAAGTTTC CGTGAAAAAG ACGGCCAACG TTTTGTGACC GATATGCAGA ATTTTATCAT	5040
TGACCTCGCC TTGGATGTCA TTGAAAATCC AATTGCTTTT GGACAAGAAT TGGACCATGT	5100
CGTTGGTGTT GTGGAGCATG GTTTATTCAA CCAATGGTG GATAAGGTAA TCGTTGCTGG	5160
ACGAGATGGA GTTCAGATTT CAACTTCAAA AAAAGGAAAA TAGAAGGGGG CATAAGATGT	5220
CTAAATTTAA TCGTATTCAT TTGGTGGTAC TGGATTCTGT AGGAATCGGT GCAGCACCAG	5280
ATGCTAATAA CTTTGTCAAT GCAGGGGTTT CAGATGGAGC TTCTGACACA CTGGGACACA	5340
TTTCAAAAAC AGTTGGTTTG AATGTCCCAA ACATGGCTAA AATAGGTCTT GGAAATATTC	5400
CTCGTGAAAC TCCTCTTAAG ACTGTAGCAG CTGAAAGCAA TCCAACTGGA TATGCAACAA	5460
AATTAGAGGA AGTATCTCTT GGTAAGGATA CTATGACTGG ACACTGGGAA ATCATGGGAC	5520
TCAACATTAC TGAGCCTTTC GATACTTTCT GGAACGGATT CCCAGAAGAA ATCCTGACAA	5580
AAATCGAAGA ATTCTCAGGA CGCAAGGTTA TTCGTGAAGC CAACAAACCT TATTCAGGAA	5640
CGGCTGTTAT CTATGATTTT GGACCACGTC AGATGGAAAC TGGAGAGTTG ATTATCTATA	5700
CTTCAGCTGA CCCTGTTTTG CAGATTGCTG CCCACGAAGA CATTATTCTT TTGGATGAAT	5760
TGTACCGTAT CTGTGAATAC GCTCGTTCGA TTACCCCTGA GCGTCCTGCC CTTCTTGGTC	5820
GCATCATTCG TCGCCCTTAT GTAGGTGAAC CAGGTAACCT CACTCGTACG GCAAACCGTC	5880
GTGACTTGGC TGTATCTCCA TTTTTCCTAA CTGTTTTGGA TAAATTGAAT GAGGCTGGTA	5940
TCGATACTTA TGCTGTGGGT AAAATCAACG ATATCTTTAA CGGTGCTGGT ATCAACCATG	6000
ACATGGGTCA CAACAAGTCA AATAGTCATG GAATTGATAC ACTATTGAAG ACTATGGGAC	6060
TTGCTGAGTT TGA AAAAGGA TTCTCATTCA CAAACCTAGT TGACTTTGAT GCCCTTTACG	6120
GCCATCGTCG TAATGCTCAC GGTACCCTG ATTGCTTGCA TGAGTTTGAT GAACGCTTAC	6180
CTGAAATTAT CGCAGCTATG AGAGAGAATG ACCTCTCTT GATTACTGCG GACCATGGAA	6240
ATGACCCAAC GTATGCAGGA ACGGATCACA CTCGGGAATA TATTCCATTG TTGGCCTATA	6300
GCCCTGCCTT TAAAGGAAAT GGTCTCATTC CAGTAGGACA TTTTGCAGAT ATTTACGCGA	6360
CTGTTGCCGA TAACTTTGGT GTGGAACTG CTATGATTGG GGAAAGTTTC TTAGATAAAT	6420

886

TGGTATAAGA	TGACGCGCTA	TGCTTTGCTG	GTGAGAGGTA	TCAATGTTGG	TGGTAAGAAT	6480
AAGGTCGTCA	TGGCGGAGCT	TCGTCAAGAA	TTGACAAACT	TGGGACTGGA	AAAGGTTGAG	6540
AGCTACATCA	ATAGTGGCAA	TATTTTCTTT	ACTTCGATAG	ATTCCAAAGC	CCAATTGGTT	6600
GAAAAGCTAG	AGACTTTCTT	TGCAGTCCAT	TATCCATTTA	TTCAGAGCTT	TTCTTTACTG	6660
AGTCTAGAGG	ACTTTGAGGC	GGAAC TTGAA	AATCTACCAG	CTTGGTGGAG	CAGAGACTTG	6720
GCACGAAAAG	ATTTTCTCTT	TTACACTGAG	GGTTTGGATG	TGGACCAAGT	CATCGCGACA	6780
GTTGAAAAGT	TAGAGCTGAA	AGATGAAGTG	CTTTATTTTG	GAAAAC TTGG	GATTTTCTGG	6840
GGGAAATTTT	CTGAAGAATC	CTATTCTAAG	ACTGCCTATC	ATAAGTACTT	GCTGAAGGTG	6900
CCTTTCTACC	GCCACATTAC	TATTTCGTAAT	GCTAAACCT	TTGACAAAAT	TGGTCAAATG	6960
CTAAAAAAT	AATAAAGGAG	ACACACAATG	ACATTTTTAA	ACAAAATCCA	TGAAACTGCT	7020
ACTTTCCTGA	AAGAAAAGGG	AATTGCAGCC	CCTGAGTTCG	GTCTAATCCT	TGGATCAGGA	7080
CTTGGAGAAT	TGGCAGAAGA	AATCGAAAAT	CCAGTTGTAG	TAGACTATGC	TGAGATTCCA	7140
AACTGGGGCC	GTTCAACAGT	AGTCGGTCAT	GCTGGTAAAT	TGGTATATGG	TGAACTGGCA	7200
GGTCGCAAGG	TCTTGGCTCT	TCAAGGGCGT	TTCCATTTCT	ATGAAGGGAA	TCCTCTGGAA	7260
GTGGTGACTT	TCCCAGTTCG	TGTGATGAAA	GTTCTTGGAT	GTGAAGGTGT	TATTGTAAAC	7320
AATGCAGCTG	GCGGTATCGG	ATTTGGTCCT	GGTACCTTGA	TGGCTATCTC	AGACCATATC	7380
AACATGACGG	GGCAAAATCC	ATTGATGGGT	GAAAAC TTGG	ATGACTTTGG	CCCACGTTTC	7440
CCAGATATGT	CTAGGGCCTA	CACACCAGAA	TACCGTGCCA	CTGCCCATGA	AGTGGCTAAA	7500
AAACTTAATA	TCAAGCTTGA	TGAAGGTGTC	TATATCGGAG	TTACTGGTCC	GACTTATGAA	7560
ACACCAGCAG	AAATTCGTTT	CTATAAGACA	CTGGGAGCAG	ATGCAGTTGG	TATGTCTACG	7620
GTTCTCTGAAG	TTATCGTGGC	AGCCCACTCT	GGCTTGAAAG	TTCTGGGAAT	TTCATGTATC	7680
ACTAACTTTG	CGGCCGTTT	CCAAGAAGAA	CTCAATCACG	AAGAAGTTGT	AGAAGTGACT	7740
GAACGTGTTA	AAGGTGATTT	CAAAGGCTTG	CTTAAAGCGA	TTCTTGCTGA	ATTGTAAGAA	7800
AAAAGATTTA	AAAGGGGGAG	TGCCTCTGTT	TTTTCAGGAT	TGACTGCCTA	TCCGGATTAA	7860
AGAAGAAACA	GAGGAATACT	ATGAGCTTCT	TCCTGCTCTT	ATAACTGAAA	GAAGCGGAAG	7920
AATAGGTATG	TCTGATCTGA	TAGCCAGCAT	TGTGAAAGAC	AAGATTCTAG	GATACTAGCA	7980
TTAGCTTCCT	AGCCAAGCAG	ACTAGTATGA	TAAGGAGAGA	TGAGAATGAA	TTGACTTTCT	8040
GAATTTCTCA	GTCTTATCAT	ATATAGCACA	ATGAGATTTT	GCTTGAGTCT	GCTTGTAAT	8100
AAACGAAAAG	AAAGATAAGA	AATAATGAAA	ATTGGTCAAC	GAATTATGCG	CTTTGGCATA	8160
AAAAATTAAG	TATCGGAGTT	GTATCTGTTG	TAGTCGGCTT	TGATTTCTAG	CTCCAGCTGG	8220

887

AATTTTCAGCC AATGAAGTAA AGCAAGATGT AACATCTGAA GTGGTAATAG GTGTGCTAGA	8280
TTCTAAGGAG GAATTGAAAG AGTCAGAAAA TGATGCTCCA AAAC TAGAAA CTCCTCTTAG	8340
AGAGGAGCCA AGACTAGCTC CTCAAACGCT TCCGGAAGCA AGTGAAGTTC TTGAAAACAA	8400
AAGGGAAGAG TCAAAAGTAG AGATAACATA ACCAGCTCAA GCGGATGATA TCCGCAAGGT	8460
TGTTGGGGAA TTAGCCAAGG ATATAAGTAT TACTAAGTTG TATATGACAG GTCATTCTCT	8520
TGGATGTTAC CTAGCTCAGA TTGCAGCGGT TGAAGCTTAC CAAAAATATC CTGATTTTTA	8580
TAACCATGTA TTGAGGAAAG TGACAACTTT CAGTGCTCCT AAAGTGATTA CTTCCAGAAC	8640
TGTTTGGAAT GCTAAGAATG GTTCTGGGA TGTGGTTTG GAAAGTCGTA AATTAGCTGT	8700
TAGTGGAAAA ATTAAGCATT ATGTGGTTGA TAATGACAAT GTTGTGACTC CCTTGATTCA	8760
TAATAATCGT GATATTGTTA CATTTACAGG TAATTCACGC TTAAACACC GTTCTCGTGG	8820
CTATTTTGAA AGTCCAATGA ATGATATTCC TAACTTTAAT ATTGGTAAAC AAGCTACCTT	8880
GGATAAACAT GGTATTCGTG ATCCGAAATT GGATAAAGTG CGATTCTTTA AGAAACAGGC	8940
TCTGCCTCGA TCTTCTAGTC AACCAAGCGC TGAACCAATG GAAATATTTG CCTCAGGAAA	9000
ACAGGTTACT CAAAGTTCGA CAGCTTTCGG AGGAGATGCT AGAAGAGCTG TGGATGGCAA	9060
AGTCGATGGT AACTATGGTC ACAATTCTGT CACTCATACA AACTTCCAAT CTAAGCCCTG	9120
GTGGCAAGTA GATTTGGCTA AAGAAGAAAC CATTCGCCAA ATCAATATTT ACAACCGAAC	9180
AGACACTGCC CAGGATAGAT TGGCAAACCT TGATGTCATT CTTT TAGACA GTTCTGGTAA	9240
AGAAATTGAG TGAAAACGTA TAACATCTCC TAAAGATGTG TCAGCACAAA TTACGATTAA	9300
CCATAAAAAA GCGCGCTATG TTCGGATTGA GCTAGAAGGC TATAATGCCC TCAGTCTTGC	9360
AGAAGTTGAA GTTTTCTGCT TTATAGCTAC GAATGCTGAA ACGGCGACAC AAGTTTCTAA	9420
GCCAGTTCAA CCAATCAGTC AGACTCCTGT GAAGGATAAA ACATTGACAA TTCAACACAG	9480
TGGAGCTTAC ATTGCCCGCT ACTCCATAAC TTGGGAAGAA GTTCCAGTAG ATAAAGATGG	9540
AAACCAAGTT GTTCGTAGTC ATTCTTGGGA AGGAAGCGGT CGCAACCAGA CTGCAGGTTT	9600
TGTCTCAAC CTCCCAATCA AAGAAAATAT GAGAAATCTG CGAGTTAAGA TTGAGAAAAA	9660
GACGGGCCTA CTATGGAATA GATGGCAAAC AATCTATGAA AACAGACCAA TTTTAGCTCA	9720
ACCCACCGT AAAATTACCC ATTGGGGTAC GACATTGAAT TCCAAGGTGA GTGACGATGA	9780
TGTCTTGTA TCTGATGGTA GAATGACAGT TAGTTTGTCT AGTTTATAAG AAAGTACTAC	9840
CTGAGCTTGA ATAGGACTCA GGTAGCTCTC TATGAAAGAA CAAAATTAAT ACTCAATGAA	9900
AATCAAAGAG CAAACTAAGA AACTAGCCGC AGGTTGCTCA AAGCACTGCT TTGAGGTTGT	9960

888

AGATAAGACT	GACGAAGTCA	GTCACATATA	TAATCCAAGG	CGACGTTGAC	GTGGTTTGAA	10020
GAGATTTTCG	AAGAGTATAA	ACAGAAAGGT	AGAGCGCGTG	TTCTAATTG	AACACGAGTA	10080
GAAAACTTTT	CTAAAAACAA	AAACGAAAGG	ATGGGTAAAC	TGTATTCGCT	GAAGTGAATA	10140
CGGGCGACTC	TCCTCTAAAT	CAAAATTAAG	AAAGGAATTG	ACCCCACCCT	AAAAGTAGTG	10200
GGAAAAAGAT	AGTTGATCTA	GCGAGCATCG	CTCACTGCGC	CCAACCTCCTA	TTTCCCTTC	10260
GCTTTTGTAT	GGGTTTGGTA	TCTTTCTCAA	TATAAAATAT	AAAATAAAGA	AAGGTAGAGC	10320
GTGTGTTTGT	ATTTGAACAC	GAGCGGAAAA	CTCGGAAAAAT	AGATAATCTG	ACTGAAAAAT	10380
CAGGATTTCT	CGTCAGGTTT	CTAATTTTCA	GTCGTTTTCT	TCTCGCTCTT	TGTATCATAA	10440
ATTATGTCTA	TCCATATTGC	TGCTCAGCAG	GGTGAATTTG	CTGATAAAAT	TCTTCTTCCT	10500
GGGGATCCTC	TTCGTGCTAA	GTTTATTGCG	GAGAATTTCC	TTGATGATGC	TGTTTGTTTT	10560
AACGAAGTGC	GTAACATGTT	TGGTTACACT	GGTACTTACA	AGGGTCACTG	TGTATCTGTC	10620
ATGGGAACATG	GGATGGGAAT	GCCATCTATT	TCGATTTATG	CGCGTGAGTT	AATCGTAGAC	10680
TACGGTGTGA	AGAAATTGAT	TCGTGTGGGA	ACTGCAGGTT	CTTTGAATGA	AGAGGTTCAT	10740
GTTCGTGAAT	TAGTTTGGC	GCAGGCGGCT	GCAACCAACT	CAAACATCGT	TCGTAATGAC	10800
TGGCCACAGT	ACGATTTTCC	ACAAATTGCT	AGCTTTGATT	TGCTTGATAA	AGCCTACCAT	10860
ATCGCCAAAA	AACTTGGTAT	GACTIONCAC	GTTGGGAACG	TTTTGTGATC	TGATGCTTTT	10920
TACTCAAATT	ACTTTGAAAA	GAATATCGAG	CTTGGTAAAT	GGGGAGTCAA	GGCTGTGGAA	10980
ATGGAAGCAG	CAGCTCTTTA	CTATCTTGCT	GCCCAATACC	ATGTTGATGC	GCTAGCTATC	11040
ATGACCATCT	CTGATAGCTT	GGTCAATCCA	GACGAAGACA	CAACTGCAGA	AGAACGTCAA	11100
AATACCTTCA	CTGATATGAT	GAAGGTGGT	TTGGAAACCT	TGATTGCAGA	ATAATTATAG	11160
CCAAAAAGGG	GCTCTTTGTC	AACTGTAGTG	GGTTGAAAAA	AAGCTAAGCT	TGAGAAAGGA	11220
CAAATTTTCGT	CCTTTCTTTT	TTGATATTCA	GGGCGATAAA	AATCCGTTTT	TTGAAGTTTT	11280
CAAAGTTCCG	AAAACCAAAG	GCATTGCGCT	TGATAAGTTT	GATGAGATTA	TTGGTCGCTT	11340
CCAGTTTGGC	ATTAGAATAG	TGTAGTTGAA	GGGCGTTGAC	GATTTTCTCT	TTGTTCTTTA	11400
GAAAGGTTTT	AAAGACAGTC	TGAAAAAGAG	GATGAACCTG	CTTCAGATTG	TCCTCAATGA	11460
GTCCGAAAAA	TTTCTCAGGG	TCTTTGTTCT	GAAAGTGAAA	AAGTAAGAGT	TGATAGATCT	11520
GATAGTGGTG	TTTCAAGTCT	TCTGAATAGC	TTAAATCTTT	GTCAAGAATT	TCTTTATTTG	11580
TTAAGTGCAT	GCGAAAAAGTA	GGGCGATAAA	AACGTTTATC	GCTsArTTTA	CGACTATCCT	11640
GTGGATGAG	TTTCCAGTAA	CGCTTGATAG	CCTTGATATC	ATGAGATTTT	CGTTCAAACCT	11700
GATTCATAAT	TTGAACACGA	AAACGACTCA	TGGCACGGCT	GAGATGTTGG	ATAATATGGA	11760

889

AACGATCTAG AACGATTTTA GCACACGGAA AAAGCTGTTT AGCCAAGTCA TAGTAAGGAC	11820
TAAACATATC CATCGTAATG ATTTTCACTT GACAACGAAC GGCTCTATCG TAGCGAAGAA	11880
AGTGATTTTCG GATGACAGCT TGTGTTCTGC CTTCAAGAAC AGTGATAATA TTAAGATTAT	11940
CAAAATCTTG CGCAATGAAA CTCATCTTTC CCTTAGTGAA GGCATACTCA TCCCAAGACA	12000
TAATCTTTGG AAGCCGAGAA AAATCATGCT CAAAGTGAAA GTCATTGAGC TTGCGAATGA	12060
CAGTTGAAGT TGAAATGGCC AGCTGATGGG CAATATCAGT CATAGAAATT TTTTCAATTA	12120
ACTTTTGAGC AATTTTTTGG TTGATGATAC GAGGGATTG GTGATTTTTT TTTACCAGGG	12180
GAGTCTCAGC AACCATCATT TTTGAASAGT GATAGCACTT GAAACGGCGT TTTCTAAGGA	12240
GAATTCCTAGA AGGCATACCA GTTGTTCGA GGTAAAGGAT CTAGACGGT TTTTGAAAGT	12300
CATrTTTCTT CATTAGACTT CCACAATCAG GGCAAGATGG AGCCTCATAA TCCAGCTTAG	12360
CGATAATTTT TTTGTGGGTA TCCATATTGA TGATATCTAG AATCTTGATG TTTGGGTCTT	12420
TAATATCGAG CAGTTTTGTG ATAAAATGTA ATTGTTCCAT ATGATTCTTT CTAATGAGTT	12480
GTTTTGTGCG TTTTCATTAT AGGTCATATG GGACTTTTTT TCTACACAAA AATAGGCTCC	12540
ATAATATCTA TAGTGGATT ACCCACTACA AATATTATAG AGCCCCAAAA GGAAGCCCTT	12600
TATGAATTGT AGGACTTCCT TTTCTTATCC AGAAATTGAT CTAGCTCTCT CTGATTTTGA	12660
AGAATAGTGA CTTTATGTGA ATATTCTTGG CAAAGTTTTT GGTAATTTTC TTTTGTAGTT	12720
TTGCGGACGC CCATCCCAA GAATCCATCT GATAAACTCC CACTCAAAGC GTTCAGGGCA	12780
ATCTACCGCC ATACTTTCTC TGACTTTTCC ACGGTATTTA AGATAACGCT TAAAGGCTCT	12840
AAAGAGACAG GTCAATGGCG AAAAATTGAG AAAGATGATT TGGTCAGCTT CTTCGATTTCG	12900
TTCTTGGTAG TAGCACCAAG AATAATTACC ATCGATGACC CAAGCTTTAT GCTTGGTGAG	12960
AAAGTTTTTT ATCTCGGTTA ACATCCATTC GCAGTCACTG TCTTGCCAAC CAGGTTGAAA	13020
TTGGAGTGTG TCCATGTGCA GTTTTGAAT GGAGTAGTAG TTAGATAACT TTTCTGCTAT	13080
AGTTGACTTA CCAGAACCAG AATATCCGAT AATTGCGATT TTCATTTTCT ACCTTTTCCT	13140
ATTTGGAGAC AAAAAACAG CCTCTATGGA CTGTTTCTTA TTTAACAAGT TTAGCTGAAA	13200
GACGAGCTTT ATCGCGGCTT GCTTTGTTTT TGTGAATCAA ACCTTTAGTT TCTGCTTTAT	13260
CGATAGCTGA GCTAGCAGCA CGGAAAAGTT CTTCAGATGG GTTTGCTTCG AAAGCTTTTA	13320
TAGCAGTACG CATAGCTGAT TTTTGAGCTG AGTTCCTTTC GATTCGTCTA ACGTTCAATT	13380
CAGCGCGTTT GATAGCTGAT TTAATGTTTG CCAATGGTCT TACCTCCATA TTTACTAACT	13440

(2) INFORMATION FOR SEQ ID NO: 129:

890

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 8512 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

CCTTTTTTCA AAAACTAGAT ACTAGTCTAT CAAAAGTAGG AAAGGGTTTC AAGAAAATTG	60
ATTGGAAATT TTTTGAAAAT CATAGAACTA TTAGCTAATC CCTAGTATTG AAAAGACTGG	120
ATAGCTTCTT TCAGGTCATC TTGTAACTA TTTCTCTGGT CAAGTTGGAC ATAGACTTCC	180
ACCAGACAGG ATCTAAAGTT GGAAAATTG TAAAAATCCT CCCTTTCTTC TATCGGAAAA	240
TCAACAGTTT TTATCCAAGA AGCTACTTGT TCTTGCTCCA ACTTCCCTTG TAAAATAGGT	300
TCATAGATCA CTCTTGCTAA ACGCCAATCC TCATCATCTG TAAAGCGAAT CGACATTCTT	360
TTAAATAGTT GGCCAAGTAT ATCAAATACT TCATGAACTC TGTMTTATAG AAAGTCTGGA	420
TGACAAACCA CCTCTGTCAG TAAATCGGCT CCATGTGCAA AAGCGTGAAC CCAACCATAC	480
TGACTTGAGA AACCCCTTGT ATCCTTTTCT TTTGAAAGAT AGTGCAAGCC TTGATTTAAA	540
AGGACATTAC GAATTTCTGG AGAAGGATT CCCAAATGAT CAAACAACCA CTGGATTCTT	600
TCCTGGTTAT AATTTGGTTT TTCTTCTGCT ATTTTCTCTA GTAAATCTTG ATACATGGTC	660
AATACCTCTA CATTTCTAGC AACTGTTCAA AAAGGCAGTC TTAAATGACT CAATATTGAA	720
TTCTCAATTA AATACAATCT GATATAAAT GACGTAAATA ACTATCAATA CCAGTTCTAC	780
AGTAAGTTCA AATTTAACAT CACGACCTTC AACGACATT TTGAAAATAG CTACAATAA	840
GACAAATAGA ATGACGCTTA ACAAGCCCAT AAACATCATT CTAATAAATT TTTCTATTCC	900
CCTACTCTCC CAACTCAGCA CTATAGGAGA TAATCTGGTC AACTGTGTCA GACAAGAATT	960
GGATGGTATC ACGGAGTGGT TTGTCTGTTG AAATATCAGC ACCGATAATC ATGGCTGACT	1020
CAAGTGGTGT CTGCTACCA CCTGATTGGA GGAGATTGAG CCAGTCTTCA GCTCCAGTTT	1080
CAGAATGTTT TAGATGAAGG TAACCAGCAG TCGAGATAAC TAGTCCTGCT GAGTAAGTGT	1140
AACTATACAA GCCCATATAG TAGTGAGCTT GCGCATCCA AGTCAGAGTT GCATCATCGT	1200
CAATTTCAAT AGCATCTCCC CAGAAATCCG TCAAAACTTC CTTCATAATG CTGTTGAGCT	1260
TGCTTGCTCC AAAGGTCTCC CCTTCTTCAA TCAATGTATA CACCTTACGC TGGAAGGCGG	1320
CTTCCAAGAG GTGGGTGATA AAGTTATGGA AGTAGGTGTC TGTCAAGCGA TGAGCCAGAG	1380
CGAAGCGTTT TTGACGTGGG TCATTAGACT GGTTCCTCAA GTAATCACTG AGTAGCAATT	1440
CATTGAAGGT TGACGGTGCT TCAACATAGT AGGTCGACAT ATGGGCATTG AAGTAACTTT	1500

891

GATGATTGTC TGAAAAGATG AATTGACCAG AATGCCCGAT TTCATGAATC AAGGTATAGA	1560
CATCGCTCAA ACGGCCTGTC CAGCTCATGA GTACATAAGG GTGTACGCGA TATGGGTCCG	1620
CCGCATAACC ACCGGAATCC TTGCCACTGT TAGCAGCAAA GTCCACCCAG CGCTCTTCTT	1680
GGTAACGAGC AACTTCCTGA CAATATTCTT GCCCAAAGG TTCTACCGAC TTCATGACCA	1740
AATCATAGGC ATCGTCAATA GTCAC TTCAG GATTTCAGGGC GCTGTCCAAG TCCAATTTCC	1800
AGTCTGCAAA GGTTCATCTTT TCAAGACCAT TTACCTTGGC AACATGCTTG AGGTATCTCT	1860
GAGCGACTGG TGCAAAGTCC TTCATGATGA GGTCAATCTG GCGGTCAAAC ATGACACGGT	1920
CCACTTCTTG TTCAGCTAGA AGATAGTCAA AGACAGAGTC GTATCCCTTC ATATCAGCCA	1980
AGAGTTTTTC AGACTTGACC TGAGCCAGAT AGGCTGCTGC AGCCGTATTT TGGTGCTTAC	2040
GAAGTCCCTC TGAGAAGGAA CGGAAGGATT TCTCAGCAAC CTCAGCATCC TCATGGTTTT	2100
GGTAGAAATT CTCATAGGTC ACAAAGCTGT TTTGTAGGT CTTGCCATGG GCTTCAAAGT	2160
CAGCCATTTC AAAATCCCCA GCTCGCATCT TAGTATAAAT GTCCTGCGGA CTGTAGAAAA	2220
CTTCACCGAG ATTTGTCAAG GCCTTCTCCA CATCTGCCCC TAAGTAGTGG GCTTTTTTGA	2280
TTTTAGCCTG ACGAATGGCA GCTGTAAAT GTGGCAATTT ACCCAAACGG TCCAAGACTT	2340
CCTCATCTGC TGCCACCAAG GCATCGTCAA AGAAGGTCAA GGCTACGCTG GCATCTGTTT	2400
CAAATCCAT CCCAGCTTGG GCAATATGG CAAATTCGTC ATTGCTATAG TCCGTCGTCT	2460
GAGGCATAAA ACCATAGTTG CCAATATGGC TCATCTGAAT GTAGATCTGT TCCAATTCCG	2520
CAAAGGCCTT CTCGAAATCC TCAAAAGTGT GAAGATTGCC CTTGTAATCA CGGCTAAACT	2580
GGTTGATGTC TTCGCGAGCT TTCTCGATTG CACGCAAGAA ATCCTCACGG TCTTGGTATA	2640
GGGCTGTTAA GTCCAGAGT TCCTTCTCTG GAAATTCTGA ACGGTGTTTT TGTTCATTT	2700
TCTTCCTCTT ATTTCTCTAA TTCTACTAAA AACTAAGGG CTGATAAAGC GTAAAGCGGT	2760
GCTGTTTCTG CTCGCAAAAT ACGAGGACCT AGGCCTGCCA AAACGGCTCC TTTAGCTTCA	2820
AAACTTTCTGA TTTCTGCAGG TGAGAGACCG CCTTCTGGAC CAAAGATAAA GAGCAGTTTG	2880
GCTCCTGTTT CAAGACCACT GACTGCTTGC AGAAGCGCAG CGGCTTCTCC TTCTTTAGCT	2940
GATTCTTCAT AGGCTACTAT GATAGAGTCA AACTGGTCCA GCTGAGCTAG AAAATCTGCT	3000
TTTTTCTCGA AAAGTTTAAT ACTTGGTACA ATATTACGCT TGCTTTGCTC GGCTGCTCCA	3060
AGGGCAATTT TTTCTAGTTT TTCAACTTTT TTACCCAATT TCTTGCCATC CCACTTGGCA	3120
ACTGACCAGT CTGCAGGAAA GGCCAGATT TGGCTAGCCC CCAGTTCGGT TACTTTTTGA	3180
GCGATGAACT CCAGCTTGTC TCCCTTGGGA AATCCAGATG CGATGGTCAC TTGGACTGGT	3240

892

AGTTCCACAT	TGTCATTTAA	TTCTTGGACC	AACTCAAAC	GACGATTTTC	CATATCCAGC	3300
ACGCGCGCCA	AGCGCTTGAT	GCCATCATCA	AAGACTAAGG	TAACCTCATC	CTCTTCTTTC	3360
AAGCGCATAA	CCTGAAACAT	ATGCTTACTG	GTTTCCTTGT	CCTCGATAGT	GACAGGAGAG	3420
ATAGCACTGC	CTTTTACAAA	ATACTGCTGC	ATGCTAGCCT	CCAATCACAC	CAGAGATATC	3480
CTTGGTTTTTC	TTAAAGACAC	AGGTATTCCA	TTCCCTTGA	ACCATGTGAG	TTTCGAGGAA	3540
AAATCCAGCT	GA CTCAGCCG	ACTGGCGCAC	CATGTCCAAC	TTGTCCTTGA	TAATGCCACT	3600
CATGATCAGG	TAGCCTTCAT	CCTTTACCAA	GCGATAAGCA	TCGTCTATTA	GATGAATGAG	3660
GATATCCGCC	AAGATATTAG	CCACAATCAC	ATCTGCCTCA	ATTTCCACAC	CCTTAAGCAA	3720
ATCTCCAGCC	GCTACATGGA	TATTTTCCAT	GCCAGGGTTG	AGCTCAATAT	TTTCCTGAGC	3780
CACACGAACC	GCCACATCAT	CCAGGTCATA	GGCGAAAATT	TCTTTAGCCC	CCAGAAGCGA	3840
GCTGGCAATA	GAGAGAACCC	CTGAACCAGT	CCCCACATCT	AGCACCGTTT	CGCCACCACG	3900
AAGAACCTGT	TCCAAGGCAA	AAAGGCTCAT	CTTGGTAGTT	GGGTGGGTTC	CAGTACCAAA	3960
AGCCATGCCA	GGATCCAGCT	TGATAATCAT	TTCCCCGCA	GTCGCCTCAT	AGTCTGTCCA	4020
AGAGGGAACG	ATGGTCAAAT	CATGAGTGAT	ACGAGCAGGT	TCATAGTATT	TCTTCCAGTT	4080
GTCTGCCCAG	TCTTCCTCAG	CCAAGGCAGT	CGTACCTATT	TTTAACTCTC	CCAAATCCAT	4140
AAAATCTGTC	AATTCCTGCTA	GACGAGCCTG	CAAATCCGCC	TCAACCACTG	TCACATCCAC	4200
CGTGTCCAGG	TAGTAGGCTG	TCACTACGAT	TTCTTCTTGC	TGCTCCACCT	CTGGGAAAAT	4260
CTCTCCAAAG	CGGTCCACAT	TTCCACATA	GTCCATACTG	TCTTCGATTG	CGACTCCTTG	4320
CGCTCCCAGC	TCAATCAAGA	GATTGAAAC	CAACTCCTCT	CCCTCACGCT	TCACTGTAAC	4380
TTTAACTCT	TGCCATGTTT	CCATTATTAA	TACCAAGCCC	GTAACACACA	AAACCAAAAT	4440
AGGAAATTCT	CTGAAGACGC	TTGTGTCTAA	GAGAAGTTTA	TCTTTTGGC	ACAGTGTTTA	4500
GGGCGGGTTC	AGTTTAGAAA	TGTAACGAA	CCATCCTTTC	TAATCACTTA	CTTTTAAATA	4560
ATCTTTTAAT	CTCTCTTGCA	ACTGAGGCAC	AACTTGACTG	GAACTAAGAA	ATTCTCAAC	4620
ATTCATCAGC	TGATAGCCCT	GTCCTTCATC	TCCGAAGATG	ATATTGTCAA	ATTGTTCTTG	4680
TCTTAGCTGA	CCAACCATAA	AGACCGATTT	CTTGCCTTTA	AAAATTACGC	TAGGATAAAT	4740
CTTGCTCCAA	AGCAGACAGT	CTTCATCTAA	ATGAATTCCC	AGTTCCCTCAT	AAACTTCACG	4800
CCGAGCGCAT	TCAAAAGGGC	TTTCGTCCCC	TTCACGGCCA	CCACCTGGCA	GTTCCACAT	4860
ATTGCCCCAG	GGAATACTTG	CCTTATCATC	GCGTAAGATA	GTCAAAAGCT	TATCCCCACA	4920
AAACAAAGCA	ATCTTGCAAC	CTGTGAAATC	AGAAATTCT	AGTTCCATCT	TCAGTTCCCTT	4980
CTAACATTTT	CTTTTCCAGC	TCGGCTAACC	AGTTTTCATA	ATATCTTTTC	TCATCCCTCA	5040

893

ACATTTCGACT	ACTATCCATT	TTCTGTCTAG	CAATCTTGAG	AGCCTTACGA	GTTCGATCTA	5100
CATCTTTCTT	CACCTTTAAT	TGATACCAGG	CTTGTATCAC	TTGAAGATTG	GACAGTTTGA	5160
GAGACAGAAA	CGATTTGACC	TGTCGAATAC	TAGCATATTG	CTCCGCTTGC	TCAAAATCTC	5220
CTTCCAACAA	GGCGATATGA	AGCAGGGATA	GTTGGGCAAC	TGTCTGCATC	ATCGGAGTAG	5280
TTGTCCCTCTC	AAGTAATGCT	TGAAACTGCT	GTTTAGCTAC	TTCTTCCTTC	CCTTCCAAAA	5340
TGGAAACTTC	ACCTTGACATA	CCTAATACAC	CATCCGCAAA	ACTCCCTCGT	GCATCCTCAG	5400
GAAGTGTCTG	AACAAAGTCT	TTCAAATCAT	ATTCTTGAGG	AGCTAGCAAG	GTCTGGGCAG	5460
AATGTCTCAA	TACCAGGTAG	GCGTATTTGG	TATTTTCAGG	GTGTTGTAGT	AATTTCCAAA	5520
TTTTTGCTCC	ATCGGTGATG	TCGACTGGCA	AAATGTTATT	TAGGAAGAAA	GATAAATTAA	5580
GAAAAATCCA	AGTCCCTGCA	AAATACCAGC	TTCTTGTCAA	AAATCCAAAC	AATATCGCCA	5640
ATAATATCAA	GCCGAGATGA	ACCATCAAGC	CTCCTGAAAG	CATCAGGATG	ATTCTTTGAT	5700
CGCTTTCATC	CTCTTTTAAA	CCAATGTATT	GAGCACCAAC	ATTTTTCAGA	ATGGCTGTTT	5760
TACTAAGATG	AAACCTGCCT	GACTTTTGG	TCAAAATAAA	ATGTCCTAAT	CCAAAAGCCA	5820
CCAGCCGATA	GCCTGTCAAG	TAGCCACAAA	AAGCATGACC	CAGCTCATGA	AGAATAAAGA	5880
TTAAATACAT	GCTTAGAAGA	GCGAAGGCAT	AACCAAAAGT	AAAGGCTAAA	ACTGCGGAAT	5940
ACCCCACTC	TGCAATGCG	ATTGTTCCAC	AAGCAAAAGC	TAGCATAATA	AAGACAACAG	6000
CTAGCACATA	AACCAAATAA	GTCCCAATTT	TCTTCATAAC	ACCTCCAACC	AACTCCTAGT	6060
ATCTTGGATA	AGGATAAAAT	TCTCCCTTTT	CCAAGCCAAT	TTTTCTTCT	TCAAAGACTT	6120
CTTGGTTCCA	TTCCATGACA	AATTCCTCTG	CTTCTGGGTC	TTCCAAAAAG	TCCATGAGGA	6180
CATCTAGCCC	AACCTCAGCA	GTATCTTTAA	GGAAAAGCGC	AAAATAAGCT	AAAAATTCAC	6240
GGGAAAATCC	TTTTTTAGGC	AGGTAAGGAA	TAACAGTCAA	ATAGTCTTCC	TCATTGACTG	6300
TTGACTTGGC	AGGATTGTAG	AAAAGGACCG	CTTCCTCAAA	AAGAATGTCA	TCTGATGAAA	6360
CCTCTCCGTC	TTCATCCACC	ATCTCCACAC	CGCAGCATTT	TGCGCTTCCA	ATAGAAAAC	6420
CACTTCTACC	GCATGGTTGC	GTTTGTCCCA	GCTAATCTCA	AAGTCAAAGG	GAAAGTTCTT	6480
GTCCAACCTCT	TCCTCTAAAA	TATCTAAAAA	TCCGTATGTT	GCCATTTTGT	CCTCTTTCTA	6540
TGCGACTCTT	TAATCGCCCC	GATTGCTCGG	AAATATGCTA	AAATAGATAC	TACCATCTTA	6600
CCACAAAATT	ATTTTATGTC	CTAATTATAC	CATATTACCT	CATTTAAACC	CTTGGTATCA	6660
GTGATTTTCT	TAAAAGTCTG	ATTTCTTCAT	TTCTCATAAA	AATCAATATA	AAAAGCCCTC	6720
GAAAGGGCTA	ATAAATCTAT	AAAATCAATA	GGCGAGTAAC	TAGCACAAAG	GGACGTGCTT	6780

894

TTTTATTGAC TATTACCACG ATACCACGCT TAATCTTAGG CTTGAACTTT CTTATCTGCA	6840
ATAGCGTCTG TCAAAGTCTG AGAAAAGTTA AGCCCCATTT CTCGTCCCAA CTTATCTGCC	6900
CATTTTGGTA TGGTCAAAGT CTTTTTAATG GGTTCCTGAC TTCCTAGGTA TTCTGATACA	6960
TCAACAGATA CCATAGAAAT AAAAGATTTA TCAAGGTCAT AGGTTGACAC GAAATCTTCA	7020
TCATCTTTAA AAGGATCATT ATCAATTAAA GACAAGCTAT TGATATCTGA TGGCTGAGGT	7080
AACTCTCCAT CACTCTCTAT CAAATCTGCA ACAGTTATCC CTAGCCACTC CGACCCATA	7140
GCCAAAGCCT CAGAAATCCC CTCTCCTTGT GTAGCTGAGT ATTCAAAATC TGGGAAATGG	7200
ACAAAATAAG TCGCTTCTGT TCCGTCTGTG TCGTCATAAT AAAATAAAGC TGGATACGTA	7260
ACTAACATTT CACTACCTCC ATATCAAAAA GCAGGGACTG AATTTTACAA CCCAGCTTGC	7320
TTTCTTATCC CTCTTTCAGT GTACTTATTC AGCTCACCAT GAAGGATTGT GATAGGTCTT	7380
TCCCCTTGCT TTTCCATTTT AATATGGGAG CCTTTACCGC CTCTAGTCTT TATCCAACCA	7440
TGGGCCGTAA GGAGTTTAAC CATCTCTTTT TGTGTCATAG GCATAGCGCT TTTACCTCCT	7500
GACAACACCA TTATAACACG TGTTACACGT ATTGTAAAGG AGTGATACTT ATTATCTAT	7560
TATACATAAA AGCCCCTAGA TGTGGTTCTA AGGGAAGCCA ATTTATTCAT ACCTATTTTT	7620
CTAATGAGTA GTAAAACTG CTTCTTTATC GAGCAATTCA TCATCTGTAT AGTCAATTGT	7680
AAAAGTATCT CGATCTAAGA CAGATTGAGG CGGAGTTGAA TGAATCATAG GAACACTGCG	7740
TACTCTATAT TTTTATCTC CAATTTTAC AAAGTATAC TCTTCGAAAA TCAAATTCAA	7800
ACCACGTCAA CGTCGCCTTA CCGTACTCAA GTACAGCCTG CGGCTAGTTT CTTAGTTTGC	7860
TCTTTGATTT TCATTGAGTA TGATTAACTC TCAAGTCTTC GAAATCAGGA TTTTCAACAG	7920
TTATTACAAG GAGGCGATTT ACTACTTCAA AAACATCAAT TATCTATTTT TTCATATTTT	7980
TTCAACCCAT TATTAGAATG AACTTCTTGG TAAGCAAAAT CAAGTTTAGA TTTAATGTTT	8040
TCGTACAAAT CTAAAATCTC TTTTGGAGTA TCTTCCCGGA AGAAAAGTTT TCTTTTCCCT	8100
GAAATAACTT GATCACTAAG AATCCAATGA CGAATTGTG TTGTAAAAAT CAAAATTCC	8160
TGACTTGGTA GTTCCATCAT TTCCATTGCT TATCACCTCT CTTTTCATTA TAGTTCATAC	8220
AATGACATTC AGCAATATTA TTTCTCAAGT CAGCACTTCC ACTTCTTTAG GCTCAACTAT	8280
CCTATTTTGA GCTTTAAGGA AAATCAAATC TCTCATGCTG ATACCTCTCC TCATTAAATT	8340
AAATAGTAAA AAAGATTCTA TCTCACTCCC TGATTATTAC AAAACCATG AAATATCACA	8400
ACTAATAGGC TAGAATGGAC ATAGTAAGAT ATAGTAGATG AGTCATTCTA CTCAAATCCA	8460
CGTTAGAAAAG GACTGCTATG CCAGACAATC TCGCCGTTCTG CATGCGCCCG GG	8512

(2) INFORMATION FOR SEQ ID NO: 130:

895

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 2869 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

CTCGTTTCAA GGTGAGTCT CTTGCAATC TTGTTGCGT TCTTCCTTTT GCCAAGGCAT	60
CTCTCCCATG GTTGGTGCCa GCCATTGTTG GAATCTTGCT CTCATTGGTT CTACCAAACA	120
AGCAAGAAAG CGATGTTTTT GAAATGGAAT AATCACTTAA ATCACTTTTG TAGCCAAGTC	180
TACAGGAGTG ATTKTCTTTT TTTATCCGAT GATAAATGTG TTATAATAGG TAGCGAAAGA	240
GGTGAAGAAA TGAATCAAAC AGTAGAATAT ATCAAAGAAC TGACAGCCAT TGCGLCGCCA	300
ACAGGCTTTA CTCGTGAGAT TCGGACTAT TTAGTCAAGA CTCTAGAAGG TTTTGGTTAC	360
CAGCCGGTTC GCACATCCAA GGGCGGTGTC AATGTAAC TAAGGTCA AAATGATGAG	420
CAACATCGCT ATGTGACTGC CCATGTAGAT ACGCTTGGTG CTATTGTCCG TGCTGTCAAA	480
CCAGACGGCC GTCTCAAAAT GGACCGTATC GGTGGCTTTC CTGGAACAT GATTGAAGGA	540
GAAAACTGTA CCATTTCATGT GGCTAGCACA GGTGAAAAG TATCAGGAAC CATCTCATC	600
CACCAAACCT CTTGCCATGT CTATAAGGAT GCAGGAACG CAGAACGCAC GCAAGACAAT	660
ATGGAAGTGC GTTTGGACGC CAAAGTAACT AGTGAAAAG AAACCTCGTG TCTTGGCATT	720
GAGGTCGGTG ATTTTATCAG TTTTGACCCA CGAACTGTG TGACAGAGAC AGGTTTATC	780
AAGTCTCGCC ATTTGGATGA CAAGGTCAGT GCGGCGATT TGCTCAATCT CCTTCGCATT	840
TATAAGGAAG AGAAGATTGA ATTGCCCGTA ACAACTCATT TTGCTTTTTC AGTCTTTGAA	900
GAAGTGGGAC ACGGTGCAAA CTCTAACATT CCTGCTCAGG TAGTAGAATA TCTGGCTGTG	960
GATATGGGAG CCATGGGAGA TGACCAGCAA ACAGACGAAT ATACAGTGTC TATCTGTGTC	1020
AAGGATGCTT CTGGACCTTA TCACTATGAC TTCCGTCAAC ATTTGGTGGC TTTGGCGAAA	1080
GAGCAAGATA TTCCATTTAA GCTGGATATC TATCCATTTT ATGGTTCGGA CGCTTCAGCG	1140
GCTATGTCTG CAGGGGCAGA AGTCAAACAC GCCCTTCTCG GTGCTGGTAT AGAGTCTAGC	1200
CATTCCTATG AGCGTACCCA TATTGACTCG GTGATCGCAA CAGAACGAAT GGTGATGCT	1260
TATCTTAAGA GCACGTTGGT GGACTAATAT GTGCCTTATT TGTCAGAGAA TTGACCTCAT	1320
CAAGAAGGAA GAAAATCCTT ACTTTGTCAA AGAGTTGGAA ACAGGCTATC TTGTGGTTGG	1380
AGACCACCAG TATTTTGAAG GCTATAGTCT CTTTCTAGCC AAGGAGCATG TCAGCGAATT	1440

896

GCACCATTTG AAAAAGGAGA CAAGACTCCG TTTTCTAGAA GAAATGAGTT TAGTCCAAGA 1500
 GGCAGTTGCC AAGGCCTTTG CTGCTGAGAA AATGAATATC GAACTGCTAG GAAATGGCGA 1560
 TGCTCATCTT CATTGGCATC TGTTCACACG ACGGACAGGT GATATGAATG GTCATGGTCT 1620
 CAAGGGTCGT GGACCAGTCT GGTGGGTTC CTTGAAGAA ATGACAGCAG AAACCTGCCA 1680
 AGCAAAACCG GATGAGATTA AAAGATTAGT CAAACGTTTA TCGTCAGAAG TAGATAAACT 1740
 ATTAGAAATA AAGGAGTAGA AATGAAGAAA AGATACCTAG TCTTGACAGC TTTGCTAGCC 1800
 TTGAGTCTAG CAGCTTGTTT ACAAGAAAAA ACAAAAAATG AAGATGGAGA AACTAAGACA 1860
 GAACAGACAG CCAAAGCTGA TGGAACAGTC GGTAGTAAGT CTCAAGGAGC TGCCCAAG 1920
 AAAGCAGAAG TGSTCAATAA AGGTGATTAC TACAGCATTC AAGGGAAATA CGATGAAATC 1980
 ATCGTAGCCA ACAAACACTA TCCATTGTCT AAAGACTATA ATCCAGGGGA AAATCCAACA 2040
 GCCAAGGCAG AGTTGGTCAA ACTCATCAA GCGATGCAAG AGGCAGGTTT CCCTATTAGT 2100
 GATCATTACA GTGGTTTTAG AAGTTATGAA ACTCAGACCA AGCTCTATCA AGATTATGTC 2160
 AACCAAGATG GAAAGGCAGC AGCTGACCGT TACTCTGCCC GTCCTGGCTA TAGCGAACAC 2220
 CAGACAGGCT TGGCCTTTGA TGTGATTGGG ACTGATGGTG ATTGTTGAC AGAAGAAAAA 2280
 GCAGCCCAAT GGCTCTTGA TCATGCAGCT GATTATGGCT TTGTGTCCG TTATCTCAA 2340
 GGCAAGGAAA AGGAAACAGG CTATATGGCT GAAGAATGGC ACCTGCGTTA TGTAGGAAAA 2400
 GAAGCTAAAG AAATGCTGC AAGTGGTCTC AGTTTGAAG AATACTATGG CTTTGAAGGC 2460
 GGAGACTACG TCGATTAAATA CTCTTCGAAA ATCTCTTCAA ACCACGTCAG CGTCGCCTTA 2520
 CCTACTGACT GCGTCGGTTC TATTCACAAC CTCAAACAG TGTTTTGAGT CGATTCTGCA 2580
 GTTTTATCTG CAACCTCAA GCTGTACTTT GAGCAstGCG GCTAGCTTCC TAGTTTGCTC 2640
 TTTGATTTTC ATTGAGTACA AAAAGTAAAC TTTTCTCTTG CAATTCAGA TAAATAGTGT 2700
 ATAATGGATG GGTATGTGAA AACATACTT GTGGGAGGTA AAAATCTCTA ATTACCGCCA 2760
 AAACCACAAA GGAGGATTTA AAAATGGCTA AAAAGTCGA AAACTTGTA AAATTGCAAA 2820
 TCCCTGCTGG TAAAGCTACA CCAGCTCCAC CGGTTGGACC TGCTCTTGG 2869

(2) INFORMATION FOR SEQ ID NO: 131:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6186 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

897

CTGAATCCCT TATAGGAGTC CAGTAACTTT TTAGCCTCTA CTTTGCCTTC ATAGGCAGCT	60
TCAACATCAT TAAAAAAGA AAGCACTGAA GCAAGTTCTT CAGTGCTCCA CGACAAATCT	120
AGTGGGTAAC TATACTGTTT GTTCATTAAC TAATACCAGC TCTCATCTCT GCTTCTTTTA	180
GTTCTTGCTT ACGATAACTA CGAGGGAGAA AAGCACGAAT CTCATCTTCA TTAAAACCGA	240
TTTGCATACG CTTGGCATCA ATAATAATG GACGACGCAA AAGACTAGGA TACTGCTCAA	300
TCAAATGAAG CAATTCCGAT ACCGAAATAC TCTCTACATC AATATTCAAT TTTTGAAAAA	360
TTTTTGAACG AGTTGAAATG ATGTCATCAG TACCATTTC GGTCAAGGAA AGGATGTGTT	420
GCAATTCTTT TCTTGTTAAA GGACTGGTCA TAATATTGTG TTCCACAAAG GGAACCTATG	480
TTTTTCTAAC CAGGCCTTAG CCTTACGACA TGATGTACAG CTCGGTGATA GAAATAGTGT	540
AATCATGCTT TTCTCTCTT ATCTATACTT TGCTACTTCT ATTATACAAA AAAATAAAGC	600
GCTTGACTAG GGATTTTTAG AAAAAAGCC TATTTTTTCA AGAAAAATAG GCTTTTTGCG	660
AACGATTGAC ACAATTGGAT TTGGTTAATT CACTCTTAAC GATGGTTTTA AACGATATAT	720
ATTTTTATAT ATGTAAATTA AAAACATCTT TCCTTTCACT TCCTACGACT TTTTCAGATC	780
AGATAGCCAA AGAAGTTTTC ATAGAGGGCA AAAAAGAGGA GGAAGGCATG AAGAAAGAAG	840
GTCTCTGGCA AAATCATAAT AACAGGATCC TTGGCTGGAT CAAAAGCCA GGTATCATCT	900
CCCACAAAGA GAATTTGATG GAAAAGAGTA AAGAATTGGT CAAAACCAAT CAAAACCTCC	960
CCAAGTCCAA TCATCACAGG TAAGACTACT AGAGCCAGGA GACTTTTTTCG ATAAAGAGAC	1020
AAAAAGTCCT TTTTCACAAT CCTATTGACA AAGACATAGA AACTTGGCAG TGTCACTAGA	1080
GCTACTAGCT GAACCAAATG AAAGAGATTC TTGACCACTG CGAAATGGTG CAGACCAGCT	1140
GCTGACGAAC GAAAATCAGG CATCTGTAAG ACCTGACTAA AAGGATTGGT CAGATAATTC	1200
ATCAAGATAT GAAAATTGTA TTGAATGGTT TCTGGTTTTA GATAGACTCG ATTCTGTTAAG	1260
TTTAGCCACT GAATCTCCAT AGGATAGAAA ATCCAAGCCA GATAAATGGT CAGAAGGATG	1320
GAGAGGGAGA GGAGAAAGAG CATAGAGCCC CAAAAGATCA ATTTAGTTTT CATCAAAATC	1380
CCACTCCGCA AGGCTAGAAA CCACATGTGT CGGTGCGATT GGCAGGCCAG CTACTTCTTC	1440
TGCCTTAGTA AAACCTGTCG TCACCAAGAG CGTTGGAATG CCATTGTCAA TCCCAGCCCC	1500
AATATCAGTC AAATAATTGT CCCCACCAT GATTAACCTC TCACGTTCCA AACCTAAGTG	1560
CTCAACCGCC TTGTCCATAA TGATGGCATT TGGTTTTCCG ATATAAACCG GCTTCACTCG	1620
TGTCGCTACT TCAAGCAGCG TAATCAGTGA GCCAGCACCT GGCAAAAGAC CGCGTTCCGT	1680
CGGGATGTTG AGGTCAGGAT TGGTTCCGAT AAAATGGGCA CCCTTTTGAA TAGCAAGAGT	1740

898

TGCTGTGGCA AATTTTTCAT AGTCGACTTG CCAATCCAGA CCAACTACCA CGTAGGCAGG	1800
TTTTTCCTTG TCTTCCACAT AACCAGCCGC CTTGATGGCT TCCTTGAGTC CTGCTTCTCC	1860
GACGACATAG ACGGTCTTTT CAAGCCCCAA ATCATTCTATA TAGTCGATGG TTGCCAAAGT	1920
CGCTGTGTAG ACACTCGATA GGGGCGTATC GATATTAAAA TTCTGAGCCA ACATCTCCTT	1980
AACACTCTCT GGAGTGC GG TGTATTGTT GGTACAAAG AGATAGGGAA TGTCCCCTT	2040
TTGCAATTCA TGAACAAAAG TCTCTCCAGC AGGGATTTCGG TCTTTCCCCT TATAAATGGT	2100
TCCGTCTAAA TCAATTAAAT AGCCTTTATA TTTTCATCTAT TTCTCCCTAA GCCTTTTMTA	2160
TTTCTTGCCA AGTAATGATT GCTTGGGCAT TGATAACCCC ATCACTTGTA ATTTTCATGCT	2220
TGCTTTCCAG TCCAGTCCGT TCAACAGCCG ATGTAATCAC CCCACCTGGT CGAAGTTCCCT	2280
TGACATACTT GAGGTGATT TTCTTGGGAA TATAGTGGGT CAAAAATCC GCTCCCATGA	2340
CCTCAAAAAT CCAGTCCAAG TATTTACTGT TATTGACATG ACCATTCTATA TCCAAGTCGT	2400
AAAAACGAAC ATGGTAATCC TTGCTGATCG GTTCTTCCAA GGACTCATAC TTCGGTCCAC	2460
GGATAAGTTT TTATCAAAA TCAGACTGGT AAGGAGCCAC AATCTCAGGT TCAACAACAT	2520
GGACTTTTCG ACTGTCGCGG TCCATGAGAA CAAAGGTCGC CATCATGTGG ATGAGCTCCT	2580
GCTCCGCTTC ATTATAAATA GTAAAGCGAC GGTAAGCAAAA AAGTCGATTG TAGCTCAAGG	2640
CTTCCGTTTC GATGGTAATT TCTTCCGCAA AACGAGGCAA ACGAACCACC TCAATATCAT	2700
ATTCTACGAT AATCCAGACC AGATTATATT CTTCCTCAAAAT GGCCTTATCA CTAAGTCCCA	2760
GTTCAATCGA CTGCATCCCT GAACTTGCA GTGACAGCAA AATCAGATCT GGAAGTTTGA	2820
TATGACCGTT CATATCAGCC ATATCAAAAG GAATTTTCAT TTTCATTGTA TAAGTTAAGC	2880
CCATGATCCT ACTCCAAAAT AAATCGTTCT GCTACAGTAT CTCCCAAAA GAGACCTCTC	2940
TTTGTCTATG GAACGTGGTC ACCCTCAATC TGCATGAGGC CTTGTTGAAC CAAATCTCTG	3000
ACAATTTCTC CATAAAGTCC AGCAAAAGAC TGTCCAAAT TTTCTCTCAA TCGCGCCATG	3060
GAAACCCCGG ATTTCTTGCG GAGTCCCAAG AACATTTCTT CTTCATTTG CTCCTTTTGA	3120
CTCAGGTGAT CTTCTGTAAT ACAAGCATTG CCTTCCTCAA CCGCACTGAG ATAATGACGA	3180
ATGGGACCAT GATTTTATA GCGTACTCCA TTGACATAAC CAGATGCCCC TGCACCAATA	3240
CCATAGTATT CAGCATGTGC CCAGTACATG AGATTATGAC GACTTTTCAA ACCGGGTTTG	3300
GAGAAATTAG AAATCTCTATA ATGCTCAAAA CCCGCTCGCT CCAGCTCTGC AATGATGTAC	3360
TCAAACATCT CCGCTTCTAG TTCTCCTTA GGCAGAGGCA ATTTCCCACG TCGCATCCGG	3420
TTCATAAAGA CCGTATGGTT TTCTAAATC AAATATACA AACTCATGTG GGGAATATCC	3480
AATCCAATGG CTTTAGCCAC ATTTTCCTT ACTTGCTCCA TGGTCTGACC AGGCAGAGCA	3540

899

TAAATCAAAT CAATGGAGAT ATTGTCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA	3600
TAAATATCCT TCTCCAAATG ACTGCGCCCA ATCTTTTTC AATCTTTATC ATCAAAGGTC	3660
TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTC AATCAGCTAT CTTATCCGCA	3720
TCCAAATCGC CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT	3780
TTAGTCAAGC CATTCAGTAA CACCTCCAGT TGCGGAGCCG ACAGGGCTGT CGGTGTTCCA	3840
CCACCGATAT AAAGGGTTGA CAACTTTTCA ATATCATAAG AACGAACTC TTCCAGCAGA	3900
TGCTCTAAAT AGCTGTCGAC TGGCTGATTT TTGATGAAGA CCTTTGAAAA ATCACAATAA	3960
TAACAAATCT GGGTACAAAA TGGGATGTGC ACATAGGCTG ACGTTGGTTT TTTCTGCATA	4020
GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAA CACCATCCCC AGATACATAG	4080
TCCGTCCGGA GATGGTGATG GTTATTCTT CTGTTATATC AATCACAATC TCTTCTGAGT	4140
CATCAAGAGC TTCGGCTTTT TCTTGCCATT GCTCCTTGAG ATTATTTAAT TGATTTTTTG	4200
ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAGC AAGTATACTG TCCACAGTGA	4260
TTTCACCTGA CTCAACCTGT TCTTTTGTTT TCAGAACAAA ATCTGTAGCC TGCTCCTTAA	4320
CTTCTGTCAG TTTTTCACAG ACTTGCTCCT TGGCATACTC CGGATCTTCT CTCAAATCAT	4380
CTAGAAAAATC TTGAGCCTGA CTGCAAACTT GTTGGCCCTT ATCACTTGTT AAAACAAGG	4440
CAAGAGCTGC ACCTGAAACG GTTCCTAAAA GGATTGAGGA TAATTTACCC ATAAGGATTC	4500
TCCTTTTTTA TTTTGTGAAA AATTTACTTG CAAGACGAAG AGCTGACAGA CTTGCACCAG	4560
TCTTGAGTGT TTTTGAACCA GCTGATGAAG CTTTCTTGCT CAAGACACGC GCATGGTCAT	4620
TGAGGTCTGA AACAGATAGA GATAAATCTG CAACAGCACT GAAGAGTGA TCAATCGTAG	4680
CCACCTTGAC ATTGATATCA TCTGCCAAGA CATTGACCTT AGCCAACAAC TCATTGGTGT	4740
GATGCAAGGT CACATCCACA TCTGAAGTCA AGGTTTAAAT CGTCTTTTCT GTTTCATCGA	4800
TGACACGACC AAGCTTTTGT ACAGTAATGA TCAGATAGAC CAAAAAGACA ATCAAAGCTA	4860
GGGCAACAAG AATATATGCA ACTTCTAACA TTTAGTTTTC CTCCTCTGTA ATATAGTAAG	4920
GGGCCTTCTT TCGATTTTGA TAAATAACGA TCATTATACC GAGACCGATA AGGACAACTG	4980
ACAGCCATTG GGACACTCGA AAGCCGAAGA ACATGAGACT ATCTGTTCGC ATACCTTCGA	5040
TAACCATACG ACCGAAACCA TACCAATCA AGTAAAAGGC CGTGATATGA CCTCGTCTGA	5100
GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAAA GCCAAGCAGA TTCCATAGAG	5160
ACTCATAAAG GAAAGTCGGT TGACGGTAGC TCCCCTCAAT ATACATCTGG TCACGGATAA	5220
AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAAGAAAT	5280

900

TACCCCAACG CCCCAAACTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAAT	5340
CCCAAGTATT GATGAGTTTA CGGTCAGCAA AGATATAGAG CACAAGAGCC CCAGTTATCA	5400
AACCACCGTA AATGGCCAAA CCACCATTCC AAATGGCAAA AATCTCTCCT AAATTCTGAC	5460
TATAGTAATC AAATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAAATA GCCAAGGGAA	5520
AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTTCTTTCTA GGTGCTTCTT	5580
TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTCACAAT ACATAAGGCA TACCAACGAA	5640
TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTCGAGCG	5700
ATTAGACTTG TCAGTCGTTT GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCCTTGCCA	5760
CGATAATTCA TGGCAGCTGC CTCAATCACA ACAGAGATAT TACGACCTGT TTTAACTGGA	5820
ATACGAATAC GAGGAATGtA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGACG	5880
ATCAAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CCTGTGAAGA	5940
ATCCTTGACA GCACTCGCAC CGTAGAGACT CATAACATCG ATAATACCAA CCCACGAAT	6000
TTCAATCAAG TGTTCAAAA TTTCAGCTGG TTCACCCAG AGAGTAATCT CATCCTTGGC	6060
AAAGATATCG ACACGGTCAT CGGCTACCAA ACGGTGACCA CGTTTGACAA GCTCAAGACC	6120
TGTCTCGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC	6180
CATCAA	6186

(2) INFORMATION FOR SEQ ID NO: 132:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9541 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

GAAATCACA ACCCTTTTGG CAAAATTTT GAGATTATTT TCACAAACTT GATTTTCAA	60
AGTATACTCA ATAAAAATTA AAAAAATCCA CTACGTCAAG GCGAGGCTAA TGTGGTTTGA	120
AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATAGTA AAATAAAAAA ACTGAACAAT	180
TTGGTTGGGG ACAGCCAAAC CAATTTCTCA CAATGTTTCA GAAACAAGGG TGTGCTATTC	240
CAATTTGAGC CTACTATAAC TGTCATAGAT TGCTGAAACA AAGTCTAGGT AAAAGTCTTC	300
ATAATAAAAA GACCTCCTAT CAAGTGTTCA AAAACTTTGA TAGGAGGTCT TGTTTTGTGA	360
AAATATTTAT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCCTTCA	420
ATTTCAATGA ATGGATTTTT TACTAATACT CATAACTGGG AATTTGCTCTG TGTAAAAATA	480

901

GCGAGATAGA TGGTATTTAT AAAACACTCA AGACAGCTAG ACTAATATCA TTTAAAACAT	540
TATCTTCTTT TGAGCGACTG TTGGTTACCA ACATAGCTAA ATTTCTTGCA TTTTCAAATT	600
GATAGGGTTC TGATTTAGCA TTCACAACCA CCAAGAGGTG TTCTTTGCCG TGAAC TTCAT	660
AGATAAGGTA GCCGCTATGT TCAATCGCAG AATGCACAAA GACATGATGG TAAAT TTCAT	720
CATAGCTAGA GTAAGAAAAG GCACCAAGTTT TTGTCTTCAA TCGGATGACT TGACGGATAA	780
ACTCAATACT GTCTTGACGC TCATTAATCA AGTTCCAGTT CACTTGGTTC ACAC TGTCAG	840
GAGCATTATA GCTATTCATC GCACGCTCTC TATCATCATG GGTCAACTCA CCAT TTCAC	900
CAGTCGCAAC CAGTTTGGA CGACCAAATT CTTGACCGAT TTCCATAAAG GCCATCCCCCT	960
GCATGAGCAG ATTCATGGCT GTGGCAGTTT CGACCTTGCG CATGATTGTC TCTGAACTTT	1020
GGTCTGGATG AAGGGTTGCC AATAAATCGT GAAGATTGTA ATGTGCATGG GCTTCTACAT	1080
AGTTAAGCAC CTGATTGGA TGTGTATAGC TTCCTAATTC ACGACTTCCT AGGATTGCTT	1140
TAGCTAGAAT TGGCTCTGTC GCAGCACCAC TGACAAAACC TGACTTGATA GCACCATAAA	1200
CTTCTCCCCC TTTGACAGCA TCGCGCTGAT TGTCAATAAA GAAACCAATA TTTGGCATCT	1260
GGTAGGCATT GTCCTTCTTG GCCTTATCAT AAGGGGCAAG ACCTGTTCCC ATATCCCATC	1320
CTTCTCCATA GAGGATAATG TTGGAGTCGA TTTTATCCAA GCTTTGACGA ATCATCTGCA	1380
TGGTCTTGAC ATCATGAATC CCCATCAAGT CAAAACGGAA GCCGTCAATA TTATATTCCT	1440
GCACCCAGTA TAGAAGAGAA TCAATCATAT ACTTGCGAAA CATTTCTGTG TCACTGGCTG	1500
TTTCAATTTCC AACACCCGTT CCATTCTGGA AGGTACCATC TGGATTCATA CGATAATAGT	1560
AATCAGGGAC TGTGTTTGG AATGGTGCAT CAACAAC TGA GAAGGTATGG TTATAGACTA	1620
CATCCATAAT GACTCCAATA CCCGCATCGT GATAAGCTTG AACCATCACC TTCAAATCAC	1680
GAATGACCTG AGCTGGATCA TCTGGATTAG TTGAAAACT AGTTTCTGGC GCGTTATAGT	1740
TTTGTGGATC ATAACCCAG TTGTAGGTTA CATTTCCATC CTCATCGTAT TCTTTATGAC	1800
GGTCTGCAAT TGGTTGCAAT TGAACATAAT TGAGCCAG CTTCTTGATG TAATCAAAAG	1860
CAGTTGACTG GCCGTATTGG TTAAGTGTTC CAGCCTGAGC AGCACCCAAG AAAGTTCTCTC	1920
GAAGATGTTT ATCTACACCC GATGTAGGTG ATTTAGTCAA ATCACGAATG TGCATTTTAC	1980
AGATAACTGC CTTACATGGA TTTTCCAAGC GCCAAGTAGC CTCCGAACCG TGCTTAACCT	2040
CGAAGTTTTC AACTTGCTTT TCTACATGGC TCAGAATAGC TGAACGTTTG CCATCAGGGC	2100
TGGTCGCGAT TGTATAAGGA TCACGTGTCA GTGTTTGGTG ATGAGGGAAT TGGACTTGAT	2160
ACTGATAAGT CTTACCTACC AAATCTTCTT CAACATCCAA ACTCCAGACA CCGATTGTAT	2220

902

TGTCCTTATG ATTATAAGAG TAGCTATTGC CTCTTTTCAT CTCAAAAGTC TTCCAAACGG	2280
GTGCATCATT AGCAGCTGAT TCATAACGA CAACTTGCAC TTCTGTCGCT GTAGGTGACC	2340
AGAGAGAAAA ATGAGCCTGA TTGTCTCTA CACGGCAACC CAATTCTCCT TGGTAACCCC	2400
AATGATGATC AAAACTAGCA CTGTTAATGG CCTTATCAAA GGCAAAAGGA TTTTGATTTT	2460
TATAGAAAGG ACTGGCAATA GCAGGATTTT CAGAGTAATA AATCCTATCA TCGCCTTCCA	2520
AAATCCAGAC CTCTGTTAAT AGGGGATAGT GATTAAAACG GATAGAATAT TCTTTACTAG	2580
TTTGACCTGT ATGAACCACA AAATTCAGC TTTCTATAAC ATGTGAACCT GGGTGTTCAA	2640
AGCTAAATAA AGCTCCAAAA TAATCTTCTT TGTAGGTTAG CAAATCAATT CGTTGATCCT	2700
GACTTTTAC AAAGGAGCAA GTGTCATATT CTCCATTCTT ACGATGGTAA TGAATGCGCA	2760
TAGGGTAGTT ATACATTTT TATTTTTCCT TTTTACTTTG TTTCTATTC ACTAATAAAT	2820
TTTTGTCAAT CTCGTCTCAA TTAACAGACA TAGTCATATT CTCTAAACTC TGTTTTTAAA	2880
CGATCCATTA CAAACTTTCT AGCCATGCCT CATCTCTGAC CTGGATACCA AGTTCTTGTC	2940
CTTTTGCAG TTTACTTCCA GCGTCTGCAC CTACCACGAC GAGGTCGGTC TTTTGTAGAA	3000
TACTACCTGT CACTTTGGCA CCCAGACTTT CGAGTTTACT TTTAGCTTCT GAGCGCTTGA	3060
GTCGTTCCTAA TTTTCTGTC AATACCACGG TCAAACCTGA CAAGGCCGCA TCCGCTACTA	3120
CCGTCTGTCC TTTATAGTCC AGATTGACCC CAGTTTCTTT CAATTCTCTG AGCAGAATTT	3180
CAGAGCCTTC TGTCGCAAAA TAAGTCTGAA GACTTTTGGC AATCAGCCA CCTAGACTTT	3240
CAATACTAGC CACTTCCTCT GAATCTGCCT GAGACAGATT TTCAATTGAA TGGAAATATT	3300
GAAGTAAAG CTGACTAACC TTGCTTCCGA CATGACGAAT TCCCAAACCA AATAAGAGCT	3360
TCTCGGCAGA ATTTTCCTTT GATGCTTGA TAGCCTGATA CAGTTTAGCA GCGGACTTTT	3420
CCTTAACTCC CTCTAAAAGG AGGAAATCCT CTTCTTGCAA ACGATAAATA TCCGCCACAT	3480
CCTTGACTAA ATTAGCAGCA AAAAGCTTCT CAACAATAGA TGGACCAAGG CCTGTAATAT	3540
TCATAGCATC ACGAGAAGCA AAGTGAATCA AGCCTTCCAT GATTTGAGCA GGGCAACGCG	3600
GATTGATACA ACGTAGGGCC ACTTCATCTT CAAAGTGCAA CAAGTCAGAG TTACAACCTG	3660
GACAGTTTGT AGGGATATCT AGTTTTTCTT CAGAAACCG TTTGGACTCT ACCACACGTA	3720
AAACGGCAGG GATGATGTCA CCAGCCTTAT ATACAATGAC CGTATCGTCT TTTCCGATAT	3780
CTTTTTCAGC AATATAATCT ACATTGTGCA GGGTCGCACG GCTAACAGTC GTACCGGCAA	3840
GTTGTACTGG TGTTAGATTA GCAGTTGGAG TTACAACACC GGTACGGCCA ACTGTCCAGT	3900
CAACTGATAA GAGTTGAGCT TCTTTTCTT CGGCAGGAA CTTGTAGGCT ACTGCCCCACT	3960
TTGGAGCCTT AACTGTAAAA CCAAGTTCTT CTGACTTGC TAGGTCGTTG ACCTTGATTA	4020

903

CCACTCCATC AATATCGTAA GGCAGATTTT CCCGTTCTTG TCCTACTTCT TGGATAAAAT	4080
TCCAGATTTC ATCTATGTTT TCAGCCAAGA TTCGCTTAGG ATTGACCACA AAACCTAGTT	4140
GTTCTAGGTA CTTCAAACCC TTTTCTTGGC TATCACGAGT TGAAGGGCTG GCTTCTTGAT	4200
AGAGAAACGT TGCAAGATTA CGCTTGGCAA CTA CTGCTGT ATCCA ACTGA CGCAGAGTTC	4260
CTGCTGCCGC ATTACGAGGA TTAGCAAAT CAGGCTCTCC ATTTTCTTGG CGCGCTTGGT	4320
TAAGTTGGTC AAAGGAAGCG CGTGGCATGT AACATTCCCC ACGAACTGTG ATATCTAGTT	4380
CTTCTGGCAA AGTCAAAGGG ATGTCTTAA CACGCTGAG GTTTTCTGTG ATATTTTCAC	4440
CAATTGAACC ATCTCCACGT GTTACCCAG CAACCAAAT CCCCTTTTCA TAAGTCAGCG	4500
AGATAGATAA GCCATCGATT TTCAGCTCAC AAATATAGGT CGGATGAGCC ACTTCCTTAC	4560
GAACACGCGC ATCAAAAGCA TCTAGCTCCT CACATGAAA AGCATCCTGC AAATATAAA	4620
GAGGATACTG ATGACTGTAT TTTTCAAAC CATCTAAAAC CTTGCCACCA ACACGATGAG	4680
TCGGACTGTC TGCTAGCACT TGCTCTGGAT AAGCAGTTT TAAGTCGACC AACTCACGGT	4740
AAAGGCGGTC ATACTCACTG TCTGAAACCG AGGGATTATC GCTGGTATAG TACTCAGTCG	4800
CATAGCGATT GAGCAAAGCG ACTAACTCAT TCATTCTTTT ATTCATAAGA CCATTTTACC	4860
ATAAAACAAG CCCTCCTCAC AAACGAGAAG GCGGAAAAA ACACCTTAGTT TGAATTTATT	4920
TTTGAACTC AAGCAACCTT ATATCAATTT TTCAAAATGA GTTCGAACAT ATCCGAGAGC	4980
TAAGAAATAT AAGGCTACAA CTCCAAGTCC AATAATCAAG AAAGAATAAA GATGGACACT	5040
TGGCAAGACT GTCATAAATC CTTTGTCAAT AGGCATAAAT AGAATAGCTA AGGTAAAAAT	5100
TGTACTCAGT ACTCTTCCAA GAAATTCGCT CTCAACCTTG GTTTGTACTT GAGTAAAAAA	5160
GTGAATATTA AAAATCGTCA TAAACAATTC ACAAATAAA TTTCCAGAAA AGGAAAGAAA	5220
AGTTGGAAGT GGTAATCCCA TCATAAAAC TCCGACACCT GTCAAAGCCA GTAAATCAA	5280
AAGATTATAA ATATTAGCTT TAATTTTACT AGCTAGAAGA GCCCAATGA TGGAAACCAAT	5340
AGCCCCATA GTTAAATAC TTGCATAGGC TCCTTCTGAC CCGTAAAGCT GATTGAAAAA	5400
GGGAAGTAGA AATTCAAAG CTGCAAAAA GAAATTAACG CTGGAAGCTA CCAGCAAAAG	5460
GAAGAAAATT TCTTGCTGAT GCCAGATATA GTGTAACCA TCCTTGATAT CTACAAAAAT	5520
ATCTCTCCCA GTAAAAGCCT TTTTCTCTTG AACTTTTGCT TCCTCTTTTG GAAGGAAAGC	5580
CACTAGAACA AAAGCAATGA AAAAAGTCAG CGAGTCTAGC AGTAGCGTCA TATGGAGACT	5640
TGCAAACTGT AAAACAAGGA AGGAAAGAAC AGGAGAGCTA ACACCTACAA CCTGCAAAAC	5700
CAGCTCTAAG CGAGAATTAT AGATCACAAT CTCATCTTTC TCCACCACTT CAGTTATGAT	5760

904

AGCTTTATTG GCTGTGCGAG AAAAGGCAAA AGCAATAGCC TGCACAATGT TAGCAACAAT	5820
CAAAGCGCCA ATCATCCAGC TATCATTCCT TATGAAAGAA ATAGCCAGAC AAAGAATCCC	5880
ACAAACAAGA TCTGCCGTCA TTAAATCTT ACGACGAGAA AAACGGTCTG AAATAACTCC	5940
GCCAAAGGGA TTGACGAGAA TAGATGTGAC GAGCTCAGAA ATCTGATACA TTCCTAAAC	6000
TGTCTGTCTT ATAGTCCCCA TAGAAGCCAA CCAGACACTA TTCCATAAT CATAGAGCAT	6060
ATTTCCCATT TTATTGATAG CCCACGGCT AATCAACTGC ACTGCATAGC GATTCATATT	6120
AAAGCTCCTC TCAAATTTTG AACTATTGT ATCAAAACCG AAAGGAGCTT TTTATTTT	6180
CCCTTATTTG GGAAATTAA CTTTGTACAA ATTTTTCGTA GTGTCCTGA TAATAGGCTA	6240
CTTGCTCTGG AAGACCTAAC ACATCAAAA TATGCATGGC CTCTTGCATC TGCTTACAGC	6300
CTTCTTTACA CTGCTCTTT TGATATAAGG CAAAACCTT TAAATAATGG AAAACATTAC	6360
GCTCATAAAG CTTAATACCT TTGTCAATAA TCTTCTCTGT ATAAGCCTCA AAATAGTTGG	6420
CATTATAAAA AGAAGATGC TCTAAACAAT GCTGGTAACA ATTGAGGGCC AAAATCAACA	6480
CTAATCTCTT ATGGCGACTA ATCTCTTGGT AAAATTCCTC CCTCTCCATA ACTTCTCTAC	6540
CAATCCGAGT GACATAGTCT ACATCGTAGA AACTATAGAG GTTACCGAAA AGAATCAACT	6600
CATACATGGT CCATTCTTCT GTTTTGAAGA GATAATCTGC TACCTTACCC AAATCATCCT	6660
GCTTCATATC ATAACCTGCA TCTCTTTGAC AAATCAGACC TTGTAGCAAA ATCCAGTTCA	6720
GCTCAAAATA AAGGGGAGTC GTCGAACCTT TAGACTTTTC AAGTTGTTCT CTTTGAAGCT	6780
TTTGAAAACC TGCAATATCG TTTGAATAGT AAAGTGGGAT AATCTGTGCC ATCATAGACA	6840
CATGTTTCATG ATTATGAAAA TTCCTTGCCT TATCCATGAA ATTTTCGATT GTTACATGAA	6900
TGTTATCCAA AATCTCAAAG AAACGGGAGA CTGCCAGGTC AGACTCCCCA AGCTCAAAGC	6960
GAGATAACTG AGAGGTAGAG CAGGATTCGC CTGCTGCTTC CTTTAAAGAA TAATTTCCAC	7020
TTGTTGCAAA TTCACGAAAT ACTTTTCCAA GATGTTCCAT CTTTACACCT GCTCTGATAA	7080
TTCTTCCCAC TCAAGCATAG CTCTTCCCTG ACGATGGCTG ATTTTGTCCA GCTCAGCCTG	7140
TAATTCCATG AGTTTGTGCG CATCGTTTGT TTCCAACATT TGTTTCAGAA TGGCTTGGCT	7200
TTGACTTTCT AGCTCTTCAA TTTCAGCTTC TAGACTTTCG ATTTGTGCGA TGAGTTTTCG	7260
AACTTCTTTT TGACTTTCTT TCTGGGCCTG ATAGTCATG ACTGGACTTG CTTCCCTTGC	7320
TTGATTGCTA GTTGAAGCTT CCTCAGTCTG ACTCATTTCT GCTGTTGCTT TCTTCTCAAC	7380
ATAGTAGTCG TAATCTCCAA GGTAGAGAGT TGAACCATTC TCAGACAATT CCAAACATG	7440
AGTTGCCACA CGATTGATAA AGTAACGATC ATGACTGACA AACAGCAAGG TTCCATCAAA	7500
GTCAATCAAG GCATTTTCTA GCACTTCCTT ACTATCAATA TCCAAGTGGT TGGTCGGCTC	7560

905

ATCCAGAATC AAAAAGTTAT TGTTTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT	7620
TTCGCCACCA GATAGCATGC CGACTGATTT TTTAACATCA TCTCCTGAGA AAAGGAAGGC	7680
TCCAAGACGG TTGCGGATTT CAACTTCTGG TGTCAGTTTG AAATCATTCC AGAGTTCATC	7740
CAGCACCGTA TTA CTGGTG TCAGCTTGCT TTGGGTTTGG TCATAGTAAC CAACCTCAAC	7800
ATTAGCGCCA AAGCGCTTTT CTCCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT	7860
AAAGGTTGAC TTGCCGATAC CATTGAGACC AACGATAGCG ACAGCATTCA TCTTACGAAG	7920
ATCTAGGTTA ATCGGTTGTG ACAAGACTTC CCCGTCATAG CCAACAGCTG CATTTTCAAC	7980
AGTCAAAACA ACATTGCCCCG ACGTTTTTTC AGACTGGAAG GTCATGTTGG CTGATTCTT	8040
GCCAGCTTCA GGCTTGTCCT AACGTTCCAT TTTTCCAGT TGTTTACGGC GAGATTGAGC	8100
ACGTTTAGTC GTTGAAGCAC GAACTAGATT GCGATTGACA AAGTCTTCCA GAGCAGCGAT	8160
TTCCTTCTGT TGCTTTTCAT AGTTTTTTC CTCAGTAACT AGCTTTTGCT CCTTCAATTC	8220
GACAAAACGA GAGTAATTCC CCACATAGCG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT	8280
AATTGTCGCA ACCTGTGCTA AGAAATAACG GTCGTGGCTG ACGATAATGA GGGCACCCT	8340
ATAGTTTACC AAGTAATTCT CTAGCCAGGC GATGGTTTCA ATATCCAAGT GGTTAGTTGG	8400
CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAAACGAGT	8460
ATTTTGACCA CCAGAAAGCT CAGCAATTTT CATCTGCCAC ATAGACTCGT CAAACTTGAA	8520
TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GGCGAAAATT	8580
CTCAGATAAG CGGTCATAAT CTGACATCAG TTTATCCAAA TCCTCACCAG ACTTTTCACC	8640
CATCTCCAGC TCCATCTGAC GCAGTTGTCT CTCCGTCCGA CGCAAATCAT TAAAGACATG	8700
AAGCATTTCA TCGTAGATGG TATTTTCAGA CTCAAAACGG CTATCTTGGG CTAGGTAAGA	8760
CAGAGAAATA TCTTTTCTT TATTGATTTT TCCGCTAGTT GGCTCCTCTT CTCCAATAA	8820
AATCTTCAAA AGAGTAGACT TACCTGCACC ATTTTTCCTA ACAAGAGCAA TCCGATCTCG	8880
TTCATCAACC TGCAGGTTGA TATTATCGAA AAGAACCCTCT CCTGCAAAAG AACGTTCAAT	8940
TTTATTAGCT TGTAAAATAA TCATACAAGT AGTATAGCAT GTTTCCTTAA GGCATTCAAG	9000
ATAATCGTAA GTCTTTTAGT ACAACTTTTA TAACATAAAA TAACTAAAT TATGTATATT	9060
TTATATTAGA TTA CTCACT ATCTTGTGG ATTTTCTAAC CAGCTAATCT TGTTCAAAT	9120
AGTTATCGCA CAAGTCTATT ATTTAATTCT TTTCATCATT TACGTACGTA TAGCAGATTG	9180
AAATAAGATG AGAACAAATC GATTGGGAAA GTAAAATTAA TTTCTATAAA TGTTTATAGCA	9240
ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT	9300

906

TTTTAACTCT ATTTATTACT AGATTTCATA ATTAAAAAAC CTA CTGACCA AGCTAGAAAG	9360
CTTGATACAA TAGGCTTTT AAAGACTGAT TATTTAACAG CGTCTTTAAG AGCTTTACCA	9420
GCTTTGAATG CTGCTACTTT AGAAGCTGCA ATGTGCATTT CTTTACCAGT TTGTGGGTTG	9480
CGACCTTTAC GTTCTGCGCG CTCACGAACT TCAAAGTTAC CAAAACCGAT CAATTGAACT	9540
T	9541

(2) INFORMATION FOR SEQ ID NO: 133:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3502 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

TTGACTATCC TATCATGCTT TCTAAGGTCT ACTCAAGAA ATCATTTTCA AGTTTTCACA	60
CCTTTCTCAA AAAAGTTAAA AAATTTTCTC AAAAACGCTT GACTCTGACC TAAGGCGAAG	120
GGTTATACTA TCATTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT	180
CAGGTGTCTC TGTCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCTTAA	240
AGTCGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATTT GGAACGCCCT CAGGTCATTC	300
TTTACTACAA ATATCTAGGC TTTTCTTTAG AGAAAAATAGC AGAGCTGTTA AAGGAAGAAA	360
GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC	420
ATCTGGATAC CTTGATTTCC ACCTTGCAAA AACTATTCA AGAACAAAA GGAGAAAGAA	480
AAATGACCAT TGAGGAAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC	540
AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG	600
GTCACGAAGA CGAGGCTACG GCCGCTTTA ACCAAGTCTT TCAAACTTTG GCACAAAATC	660
TTCAAGTTGG TTTACCTGCA ACAGCAACCG AAAACCAGGA GCAAGCAGCC AAGCTCTTGC	720
AAGCCATTCG CACTTATGGA TTTGACTGCT CTATTGAGGT ATTCGGTCAT ATCGGTAAAG	780
GTTACGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTTCT GAAACAGCCC	840
AGTACACGTC AGATGCCATT GCGGTTTACG TTCAGACAAA TGCAGAATAA ATAGGCTAGG	900
AATTTCTTAG CCTATTTTTT ACTTCAAATC ATAAAGCCAG TCGTCACCGT TTTTGTAGTA	960
AAAGAATCA CTGAGATCTT CTTCTAGAAA CACACGAAGC ATATCAGACA TATCATCGGT	1020
TGCAAGTTTT AGATGAGAAA GATTTTCAAA GTCCTCCAC CAAACTTTCC CTTCTGTCTGA	1080
AGACTGGAGT TCACCAGTAA AGTGTCTGT CTTGTAAAAA AGGACGACAT AACGATAATC	1140

907

CTTGTCGTCA TACCAGTTT TGATACCACA GAGTTGGGGT TTGGAAATGA TCAGACCAGT	1200
TTCTTCTTTC ACTTCACGAA TGACAGCATC GACAAAGGAT TCGCCACGTT CAACATGACC	1260
ACCAGGAAAA GTAATGCCAG ACCAGTCGGG ATTAACTCGG TCTTGGACCA GGACCTTATC	1320
TCCGTTTTTA ATCATACACA TGTTAACAAA TTCGACTGCC TCTCTTCTGT TCATTCTTCA	1380
CAACCTTTAA TCTTTAATCA TAATGCAGAC TTCCCGCCAC CCAGCCGGTA CAGAGGGCAG	1440
AAGTGATGTT AAAGCCACCC GTGTGGGCAT TGATATCCAT AACTTCGCCT GCAAAGTGGA	1500
GGCCAGGTAC CAGCTTACTT TCAAGGGTTT TAGGATTGAT TTCCTTGAGA CTGACTCCAC	1560
CCTTGGTAAC AAAGGACTTT GCAAGGGACA TTTTTCAGT TACAGGAATT TTAAGTTCTT	1620
TAATGGACTG GACAAGTTGT TCTCGTTCCT TTTCAGTCAG TTGTTTGA CTGACTTTCAGGAT	1680
ATCCTTGTAC AAAAAATCG GCCAAGCGT CTGGTAACAA GGTTTTTAAA GCGTTTTTCA	1740
AGGATTTTTT CCGATTTTCT TCTAGAAATG TAACCAAGTC CTTCTCAGAA AGTTGAGGCA	1800
AAACATCGAG TGAGAGAACC TCCCCACCTT TGACAAAGCT AGACATGCGT AGGGCAGCAG	1860
GACCTGACAA ACCAAAGTGG GTAAAGAGTA AATCATGAGT GATGACATGC TTACCATAAC	1920
TTAGGGTCAC ATCGTCCAGA GAAATACCTT GTAAGGCTTT ATGTGGAAAA TCTGTTAATA	1980
AAGGACTTTC AGCAGCCTCA AGATCGGTGA TGGTATGCTT AAAATGGCGA GCAATCTCGT	2040
GACCAAAACC AGTCGAACCA GTCGAAGGAT AAGACTTACC ACCTGTTGTG ACAATGAGTT	2100
TCTCACAAGT GAAGGTTTGA TCCGCTGACT TAAGGACAAA CTGGTCATCT ACTTTTTTAA	2160
CAGAAACGAT TTCTATTGA GTAGCAACTT GACCACCTAG TTCGGTGATT TTCTTTTCCA	2220
AAGCTTCGAT AATAGTCCGA GACTTGTCAC TGGCTGGAAA GACGCGTCCG TGGTCTTCGA	2280
CCTTAAGTTT AACACCATT TCTGTAAAA AGTTGATGAT GTCATGATTA TCGAACTGGG	2340
AGAAAACACT GTAAAGAAAG CGTCCGTTTC CAGGAATTCC AGCTAGCAGG TTGTCTAAGC	2400
TACCATTGTT GGTCACATTG CAACGTCCCC CACCACTCCC AGCTAATTTT TTTCCAAGTT	2460
TCCGATTTTT TTCGATGAGG AGGGTTTTCT GTCCATAAAA GCTACTGGAA ATCGTAGCCA	2520
TCATACCAGC AGGTCCCCCA CCGATGACAA TAGTATCAAA ATGTTTCATA GCTCTATTGT	2580
ACCACAAAAA AACAAAGAT GATGGTCACC TCTTGTCAG AATGCAATTA ATCAATTTCA	2640
TAGCCCATCA GCAAACCGCC CTCTTCTGCA TAGAACTGC AGAGACCAGA GGTGGTAGA	2700
ATTTTAATAT CCGCTTGTGG GAAGGTTTCA CGGATTCGCT CTGAGAGCTG TTGACAACAT	2760
TTTTCGTTAT TCGGTGGGC CATGACAATA CGGCCACCAG CATATCCAGC TTTTACTAAC	2820
TCATCATAGG CAGCTTGAAC TGATTTCTTT GATCCCCTTG CTTTTGTAG CAATTCGAGA	2880

908

GTCCCAGTTT CACTAGCTTT TCCGACCATA CGAATGTTGA GAAGGCCAAC GACCGTACCG	2940
ATAAGCTTGC TCAAACGGCC GTTCTTCACC AAGTTATCGA CTTTGGCTAG GACAAAGAGC	3000
AACCTAGTTT TTTCTTGATA GGCGGTGATA GCTTCAACCA CTTCTTCAAA AGACAAGCCC	3060
TGGTCAATCA AGTCATTCAA TTTTCTACG AGTAGGTCAA CTTACCACC AGCAGATAAA	3120
CTATCAATCA CATGAATCTT AGTGTACGGA TGGTCTTCCA GATAAATATT CTTTGCTAGT	3180
TGAGCACTAT TGTGACTGCC AGAAAGGGTA CCTGTGATGG TTACTAGGAA AATGTTTTTG	3240
GCACCTTCAA ATGCTCGCAA ATAGTCATCT GGGCTTGGAC AAGCCGATTT TGAAGCTTCT	3300
GCAGTTGCAT ACATGGTTTC CATCATTTGG TCAATATCGA GACTGGCGTC ATCAACAAAG	3360
ACCTGATCAG CTAATTGAAT GGTAAAGGG ACACCTACAA AGGTTGTGTT AATAGCTGGT	3420
GTTGGCAGTT GACGATAATC ACAACCAGAG TCAGCAATAA TCTTCCAAGT CATAGAAATT	3480
CTCCATCTTT GTCAGGAACG AT	3502

(2) INFORMATION FOR SEQ ID NO: 134:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12665 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

CGATTGATTT TTTTAAAGCG TTCGATAGAG AATGAGAAAC GAATCCTTAG CAATGGCGGG	60
AAAGAATTG GAGTTGAGAA TACAAAACGA TTAATATGG CTCATATTGT TTTTATCTC	120
TCTTGCTTGG TTGAGGCAAT GGTGCACAAG ACAATTTTGG ATGGCATGGG CATGGTTGGT	180
TTAGTCTTGC TTATTTTTC TATGCTGATG TTGATGTTGG TGATTCACCT GTTGGGAGAT	240
ATTTGGACAG TGAAGCTTAT GCTTGTCAAT AATCACAAT ATGTAGATCA TATCTTGTTC	300
AGGACAGTAA AACACCCTAA TTACTTTTTC AATATCTTTC CTGAGTTGAT TGGCTTGACC	360
TTGTTGAGTC ATGCTTATGT GACTTTTGT TTAGTTTTTC CAGTTTATGC AGTTATTTTG	420
TATCGACGAA TAGCTGAAGA GGAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC	480
ATAAAGAGAT AAATACAAAA TTCGATTAT ATACAGTTCA TATTGAAGTG ATATAGTAAG	540
GTTAAAGAAA AAATATAGAA GGAAATAAAC ATGTTTGCAT CAAAAAGCGA AAGAAAAGTA	600
CATTATTCAA TTCGTAAATT TAGTGTTGGA GTAGCTAGTG TAGTTGTGTC CAGTCTTGT	660
ATGGGAAGTG TGGTTCATGC GACAGAGAAC GAGGGAGCTA CCCAAGTACC CACTCTTCT	720
AATAGGGCAA ATGAAAGTCA GGCAGAACA GGAGAACAAC CTAAAAAAT CGATTGAGAA	780

CGAGATAAGG CAAGGAAAGA GGTCTGAGGAA TATGTAAAAA AAATAGTGGG TGAGAGCTAT	840
GCAAAATCAA CTAAAAAGCG ACATACAATT ACTGTAGCTC TAGTTAACGA GTTGAACAAC	900
ATTAAGAACG AGTATTTGAA TAAAAATAGTT GAATCAACCT CAGAAAGCCA ACTACAGATA	960
CTGATGATGG AGAGTCGATC AAAAGTAGAT GAAGCTGTGT CTAAGTTTGA AAAGGACTCA	1020
TCTTCTTCGT CAAGTTCAGA CTCTTCCACT AAACCGGAAG CTTCAGATAC AGCGAAGCCA	1080
AACAAGCCGA CAGAACCAGG AGAAAAGGTA GCAGAAGCTA AGAAGAAGGT TGAAGAAGCT	1140
GAGAAAAAG CCAAGGATCA AAAAGAAGAA GATCGTCGTA ACTACCCAAC CATTACTTAC	1200
AAAACGCTTG AACTTGAAAT TGCTGAGTCC GATGTGGAAG TTAATAAAGC GGAGCTTGAA	1260
CTAGTAAAAG TGAAAGCTAA CGAACCTCGA GACGAGCAAA AAATTAAGCA AGCAGAAGCG	1320
GAAGTTGAGA GTAAACAAGC TGAGGCTACA AGGTTAAAAA AAATCAAGAC AGATCGTGAA	1380
GAAGCAGAAG AAGAAGCTAA ACGAAGAGCA GATGCTAAAG AGCAAGGTAA ACCAAAGGGG	1440
CGGGCAAAAC GAGGAGTTCC TGGAGAGCTA GCAACACCTG ATAAAAAGA AAATGATGCG	1500
AAGTCTTCAG ATTCTAGCGT AGGTGAAGAA ACTCTTCCAA GCCCATCCCT GAAACCAGAA	1560
AAAAAGGTAG CAGAAGCTGA GAAGAAGGTT GAAGAAGCTA AGAAAAAGC CGAGGATCAA	1620
AAAGAAGAAG ATCGCCGTAA CTACCCAACC AATACTTACA AAACGCTTGA ACTTGAAATT	1680
GCTGAGTCCG ATGTGGAAGT TAAAAAGCG GAGCTTGAAC TAGTAAAAGA GGAAGCTAAG	1740
GAACCTCGAA ACGAGGAAAA AGTTAAGCAA GCAAAAGCGG AAGTTGAGAG TAAAAAGCT	1800
GAGGCTACAA GGTTAGAAAA AATCAAGACA GATCGTAAAA AAGCAGAAGA AGAAGCTAAA	1860
CGAAAAGCAG CAGAAGAAGA TAAAGTTAAA GAAAAACCAG CTGAACAACC ACAACCAGCG	1920
CCGGCTCCAA AAGCAGAAAA ACCAGCTCCA GCTCCAAAAC CAGAGAATCC AGCTGAACAA	1980
CCAAAAGCAG AAAAACCAGC TGATCAACAA GCTGAAGAAG ACTATGCTCG TAGATCAGAA	2040
GAAGAATATA ATCGCTTGAC TCAACAGCAA CCGCCAAAAA CTGAAAAACC AGCACAACCA	2100
TCTACTCCAA AAACAGGCTG GAAACAAGAA AACGGTATGT GGTACTTCTA CAATACTGAT	2160
GGTTCAATGG CGACAGGATG GCTCCAAAAC AATGGCTCAT GGTACTACCT CAACAGCAAT	2220
GGCGCTATGG CGACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTATCT AAACGCTAAT	2280
GGTTCAATGG CAACAGGATG GCTCCAAAAC AATGGTTCAT GGTACTACCT AAACGCTAAT	2340
GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2400
GGTTCAATGG CGACAGGATG GCTCCAATAC AATGGCTCAT GGTACTACCT AAACGCTAAT	2460
GGTGATATGG CGACAGGTTG GGTGAAAGAT GGAGATACCT GGTACTATCT TGAAGCATCA	2520

910

GGTGCTATGA	AAGCAAGCCA	ATGGTTCAAA	GTATCAGATA	AATGGTACTA	TGTCAATGGC	2580
TCAGGTGCCC	TTGCAGTCAA	CACAACTGTA	GATGGCTATG	GAGTCAATGC	CAATGGTGAA	2640
TGGGTAAACT	AAACCTAATA	TAAGTAGTTA	ATACTGACTT	CCTGTAAGAA	CTCTTTAAAG	2700
TATTCCCTAC	AAATACCATA	TCCTTTCAGT	AGATAATATA	CCCTTGTAGG	AAGTTTAGAT	2760
TAAAAAATAA	CTCTGTAATC	TCTAGCCGGA	TTTATAGCGC	TAGAGACTAC	GGAGTTTTF	2820
TGATGAGGAA	AGAATGGCGG	CATTCAAGAG	GCTCTTTAAG	AGAGTTACGG	GTTTTAAACT	2880
ATTAAGCCTT	CTCCAATTGC	AAGAGGGTTT	CAATCTCTGC	CAGGGTGCTG	GCTTGCGAAA	2940
TGGCTCCACG	GAGTTTGGCA	GCGCCAGATG	TTCCACGGAG	ATAGTGAGGA	GCGAGACCGC	3000
GGAATTACAG	AACTGCGACG	TTTTCTCCTT	TGAGGTTAAT	CAATCGTTC	AAGTGTTCGT	3060
AGGCGATCTT	CATCTTGCTC	TCAAAGGTCA	AATCAGGTAG	GATTTCTCCT	GTTTCAAAGT	3120
AATGGTTGAT	TTGGTTGAAG	AGGTAAGGAT	TTCCCATGGC	AGCTCGGCCA	ATCATGACTG	3180
CGTCAGCACC	AACTTCTTCG	ATGCGTTGCT	TGGCTTCTTG	GACAGTACGG	ATATCACCGT	3240
TGGCGATGAA	TGGAATCTTG	GTTAGAGCTT	GGGCAACCTT	GTAAAGGGTC	TCAAGGTCTG	3300
CGTGGCCAGT	ATACATTTGT	TCACGGGTAC	GGCCATGCAT	GGCGAGGGCA	GAAACACCTG	3360
CAGCTTCAGC	AGCGAGAGCA	TTTTCTACTG	CAAGAGATGG	GTCCGCCAG	CCGGTACGCA	3420
TTTGTACAGT	AAGTGGGATA	TCAAGGACAG	ACTGGACCTT	GTTGATGATG	GAGTAAATCT	3480
TGTCTGGATC	CTTGAGCCAC	ATAGCACCAG	CTTCGTTCTT	CACGATTTTG	TTGACAGGGC	3540
AGCCCATGTT	GATATCGACG	ATATCGGTCT	TGGTGTTTTC	TTGGATGAAT	TCTGTGCGC	3600
GTGCTAGGCT	GTCTTCATCG	CTACCAAAAA	GTTGGATAGA	GACAGGGTTT	TCGCCCTCAT	3660
CGATATGAAG	CATGTGCAGG	GTTTTTTCGT	TGTTGTATTG	GATTCCCTTG	TCAGAGACCA	3720
TTTCCATTAC	AACGAGTCCA	GCTCCGAGCT	CCTTTGCGAT	AGTACGAAAG	GCTGAGTTGG	3780
TCACGCCAGC	CATAGGCGCT	AAAACGGTAC	GATTGGGAAT	CTCAATATTG	CCAATCATAA	3840
AAGGTGTATT	AAGATTGTGC	ACGAATGAGT	TCCTCCAGGT	CCTTTTCATC	AAAGTTGTAA	3900
GTAGTTTGGC	AGAATTGACA	AGTGATTCTT	GCCCCGTGGT	CTTCCTCTTT	CATTTCCCTGT	3960
AAGTCTGAGC	TTGGAAGGCT	GGCAAGAGCG	TTCATAAAGC	GTTTCATGGCT	ACAGTCACAT	4020
TGGAACCGA	TTTCTTCTTC	AGAAAGACGC	TTGTAGGCTT	CGTCCCGGTA	GATAGCCTTG	4080
AGGAGGGCTT	CGATATGGTC	GTCGCTTTCG	AGAAGAGTAG	AGATAGCTGG	CATTTCTTGG	4140
ATGCGTTTTT	CAAAGCGAGC	AATCTCTTCT	TTCTTGCGTC	CTGGCAAGAC	TTGAACTAGG	4200
AAACCACCTG	CAACCTTGAC	CTTGCTTCC	TCGTCCAAAA	GGACATTGAG	GCCGACCGCT	4260
GAAGGCGTTT	GTTGGCTTTC	AGTAAGGTAA	AAGGCAAGGT	CTTCACCGAT	TTCTCCAGAG	4320

911

ATGAGGGGAG TTATAGAGTT GTAAGGATTT CCAGTACCGT AGTCTGTGAT AACGAGGAAT	4380
TGACCATTTC CAACAAAAGG TCCGACTAGG ACTTCACCAG TCGCAGTCTT TTTGATGTCA	4440
ACACCAGGAT TTTGAACATA GCCTTTGACG TTCCCCTTGG TATCAGCGAC GGTGATAATA	4500
GCACCTAGAG AGCTAGATCC CAACACCTTA ACTGTAAGTT TGGTATTTCC TTTTTCATTG	4560
GCTGCGAGAA TCTGGCTAGC GATAAGAGTT CGACCAAGCG CTACAGTTGA GCTAGCTTGG	4620
GTTTGATGTT TTTCTTGAGC AGTGCGGACG GTTTCAGTGC TATCAAGGAC AAAAGCACGA	4680
AAGGcTCCGC TTTCTGATAT AGTTTAAATA ATTTTATCCA TAGCTACTAT TTTAGCATAA	4740
AAATGCCCCA AGGGGGAGCC GTGTGTTTAC TGATTTTCAG GATAATGGAC CAGGAAATCA	4800
GCATGAAAAT AAAAAGAGAA ACAGATTATT TTAGCATTTG TCAGATTAT GCTATGCTTA	4860
AGGTAGAAAA TGAAAGGGAT AACAAATGTA TTTAGGAGAT TTGATGGAGA AAGCCGAGTG	4920
TGGTCAATTT TCAATACTTT CCTTCTATT ACAAGAGTCT CAGACGACCG TCAAGGCTGT	4980
AATGGAAGAA ACAGGATTTT CAAAAGCAAC CCTAACCAA TATGTCACCC TGCTCAATGA	5040
CAAGGCTTTG GATAGTGGCT TAGAGCTGGC TATTCACCTCA GAAGATGAAA ATCTGCGTCT	5100
GTCTATCGGT GCAGCTACCA AGGGGAGAGA TATTCGGAGC TTGTTTTTGG AGAGTGCTGT	5160
TAAATACCAG ATTTTGGTTT ATCTTCTCTA CCACCAACAG TTTTATAGCCC ATCAGCTGGC	5220
TCAAGAATTG GTGATTAGCG AGGCTACGCT TGGTCGTCAC TTGGCTGGTT TAAATCAGAT	5280
TTTGTCAGAA TTTGATTAT CCATCCAAA TGGCCGTTGG CGAGGTCCAG AGCATCAGAT	5340
TCACTATTTT TATTTCTGTC TTTTCCGAAA GGTCTGGTCG AGTCAGGAAT GGAAGGTCA	5400
CATGCAGAAA CCAGAGAGAA AACAGGAGAT TGCCAATTTA GAGGAAATCT GCGGTGCAAG	5460
TTTGTCTGCG GGGCAGAAAT TGGACTTGGT TCTCTGGGCT CACATCAGTC AACAACTCT	5520
TCGGGTCAAT GCTTGTCAGT TTCAAGTCAT AGAAGAGAAA ATGCGAGGGT ATTTTGACAA	5580
TATCTTTTAT CTTCGTTTGC TGAGAAAGGT TCCGTCCTTT TTTGCTGGGC AACATATTCC	5640
ACTAGGAGTT GAGGATGGTG AGATGATGAT ATTCTTCTCT TTTCTCCTAT CTCATCGCAT	5700
TCTTCCTCTT CATACTATGG AGTATATTCT TGGTTTGGG GGGCAGTTGG CAGATTTACT	5760
GACGCAATTG ATTCAAGAAA TGAAGAAGGA GGAATATTG GGGGATTATA CAGAGGACCA	5820
TGTCACCTAT GAACTCAGTC AGCTTTGTGC TCAAGTCTAT CTCTATAAGG GCTATATTTT	5880
ACAGGATCGC TACAAGTACC AGTTAGAGAA TCGTCATCCA TATTTACTGA TGGAACATGA	5940
TTTTAAAGAG ACAGCAGAGG AGATTTTCA TGCTCTACCT GCTTTTCAAC AGGGGACAGA	6000
TTTAGATAAG AAGATTCTCT GGAATGGCT CCAGTTAATC GAATATATGG CTGAAAACGG	6060

912

TGGCCAGCAT ATGCGGATTG GTCTGGATTT GACATCTGGT TTTCTTGTCT TTTCAAGGAT	6120
GGCAGCCATT TTGAAACGGT ATTTGGAATA CAATCGTTTT ATTACCATTTG AAGCTTATGA	6180
CCCTAGTCGG CATTATGATT TGCTGGTTAC CAATAACCCG ATTCATAAGA AGGAACAGAC	6240
ACCAGTCTAT TATTTAAAAA ATGACTTGGA TATGGAGGAT TTGGTAGCGA TTCGCCAGTT	6300
ATTATTCACT TAAAAGGCTT GGTTAATCCA GGTCTTTTTT GTGAAATTCA CACAATCTCC	6360
TCACATTTTT TTAATAATTA AAAAAAGTTG ATAAACAAGA AAGCGCTTTA TTTTGTATAC	6420
TAGTAAGTGT AAAGAGGAAA CACCTCAAGA TCTTTATCAG GAGGACAGTA CATGTCACAA	6480
GAAAAATACA TCATGGCCAT TGACCAGGGA ACTACAAGTT CTCGTGCCAT CATTTTCAAC	6540
AAAAAAGGGG AAAAGGTTAG CTCGAGTCAA AAAGAGTTTA CCCAGATTTT CCCTCAGGCA	6600
GGTTGGGTTG AGCACAATGC CAATGAAATT TGGAACCTCG TTCAGTCAGT TATTGCGGGT	6660
GCTTTCATCG AAAGTGGTGT CAAGCCAAAT CAAATCGAGG CAATCGGGAT TACCAACCAA	6720
CGTGAAACAA CGGTGTCTG GGATAAGAAA ACAGGACTTC CTATCTACAA TGCTATCGTT	6780
TGGCAGTCAC GCCAGACAGC ACCTTTGGCT GAGCAACTAA AAAGCCAAGG TTATGTGGAA	6840
AAATCCCATG AAAAGACTGG TTGATTATT GATGCTTACT TCTCTGCTAC CAAGGTTCGT	6900
TGGATTTTGG ATCATGTAGA AGGTGCTCAA GAGCGAGCAG AAAAAGGGGA ATTGCTCTTT	6960
GGTACTATCG ATACTTGGTT GGTTTGAAA TTGACTGACG GTGCGGCTCA CGTGA CTGAC	7020
TACTCAAATG CAGCTCGTAC CATGCTTTAT AACATTAAAG AACTCAAATG GGATGATGAG	7080
ATTTTGAAAA TCCTTAACAT TCCGAAGCT ATACTTCCAG AAGTTCGTTC TAACTCCGAA	7140
ATCTACGGCA AGACAGCTCC ATTCCATTTT TACGGTGGAG AGGTGCCAAT CTCAGGTATG	7200
GCTGGGGACC AACAAGCAGC CCTCTTTGGA CAGTTGGCTT TTGAGCCAGG TATGGTTAAG	7260
AATACTTATG GAACAGGCTC TTTCATCATC ATGAATACTG GGGAAGAGAT GCAGTTGTCT	7320
GAAAACAACC TCTTGACAAC CATTGGTTAC GGAATCAACG GTAAGGTTTA TTATGCCTTG	7380
GAAGGTTCTA TCTTCATCGC AGGAAGTGCT ATTCAGTGGC TTCGTGACGG TCTTCGCATG	7440
GTTGAAAATT CACCAGAATC TGAAAAATAC GTCGTGATT CTCACAACAA CGATGAAGTT	7500
TATGTCGTTT CAGCCTTTAC AGGTCTAGGC GCTCCATACT GGAACCAAAA TGCTCGTGGT	7560
TCCGTCTTTG GTTTGACTCG TGGAACAAGC AAAGAAGACT TTATCAAGGC GACTTTGCAA	7620
TCTATTGCTT ATCAAGTGCG TGATATCATC GACACCATGC AAGTGGATAC TCAGACCGCC	7680
ATTCAAGTAC TGAAGGTGGA TGGTGGTGCA GCCATGAACA ACTTCCTCAT GCAGTTCCAG	7740
GCGGATATTT TAGGCATTGA CATTGCACGT GCTAAAAACC TGGAACAAC AGCTCTAGGA	7800
GCGGCCTTCC TAGCAGGTTT GTCAGTAGGG TACTGGAAAG ACTTGACGTA GTTGAAACTC	7860

913

TTGAACGAGA CAGGAGAACT CTTTGAGCCA TCTATGAACG AATCTCGCAA GGAACAACTC	7920
TACAAGGGCT GGAAGAAGGC TGTGAAAGCA ACTCAAGTCT TTGCGGAAGT AGACGACTAA	7980
TACTGGCAGA ATAAAGCGAT TTATTTAGAA AGTGTGTAAA TATGGAATTT TCAAAGAAAA	8040
CACGTGAATT GTCAATTAAA AAAATGCAGG AACGTACCCT GGACCTCTTG ATTATCGGTG	8100
GAGGAATCAC AGGAGCTGGT GTAGCCTTGC AGGCGGCAGC TAGCGGTCTT GAGACTGGTT	8160
TGATTGAAAT GCAAGACTTT GCAGAAGGAA CATCTAGTCG TTCAACAAAA TTGGTTCACG	8220
GAGGACTTCG TTACCTCAAA CAATTGACG TAGAAGTGGT CTCAGATACG GTTCTCGAAC	8280
GTGCAGTGGT TCAACAAATC GCTCCACACA TTCCAAAATC AGATCCAATG CTCTTACCAG	8340
TTTACGATGA AGATGGAGCA ACCTTTAGCC TCTTCCGTCT TAAAGTAGCC ATGGACTTGT	8400
ACGACCTCTT GGCAGGTGTT AGCAACACAC CAGCTGCGAA CAAGGTTTTG AGCAAGGATC	8460
AAGTCTTGGA ACGCCAGCCA AACTTGAAGA AGGAAGGCTT GGTAGGAGGT GGAGTGTATC	8520
TTGACTTCGG TAACAACGAT GCGCGTCTCG TGATTGAAAA CATCAAACGT GCCAACCAAG	8580
ACGGTGCCCT CATTGCCAAC CACGTGAAGG CAGAAGGCTT CCTCTTTGAC GAAAGTGGCA	8640
AGATTACAGG TGTGTAGCT CGTGATCTCT TGACAGACCA AGTGTTTGAA ATCAAGGCCC	8700
GTCTGGTTAT TAATACAACA GGTCTTGGA GTGATAAAGT ACGTAATTTG TCTAATAAGG	8760
GAACGCAATT CTCACAAATG CGCCCAACTA AGGGAGTTCA CTTGGTAGTA GATTCAAGCA	8820
AAATCAAGGT TTCACAGCCA GTTTACTTCG ACACAGGTTT GGGTGACGGT CGTATGGTCT	8880
TTGTCTCCC ACGTGAAAAC AAGACTTACT TTGGTACAAC TGATACAGAC TACACAGGTG	8940
ATTTGGAGCA TCCAAAAGTA ACTCAAGAAG ATGTAGATTA TCTACTTGGC ATGTGCAACA	9000
ACCGCTTCCC AGAATCCAAC ATCACCATTG ATGATATCGA AAGCAGCTGG GCAGGTCTTC	9060
GTCCATTGAT TGCAGGGAAC AGTGCCTCTG ACTATAATGG TGGAAATAAC GGTACCATCA	9120
GTGATGAAAG CTTTGACAAC TTGATTGCGA CTGTTGAATC TTATCTCTCC AAAGAAAAAA	9180
CACGTGAAGA TGTTGAGTCT GCTGTCAGCA AGCTTGAAAG TAGCACATCT GAGAAACATT	9240
TGGATCCATC TGCAGTTTCT CGTGGGTCTA GCTTGGACCG TGATGACAAT GGTCTCTTGA	9300
CTCTTGCTGG TGGTAAAAATC ACAGACTACC GTAAGATGGC TGAAGGAGCT ATGGAGCGCG	9360
TGGTTGACAT CCTCAAAGCA GAATTTGACC GTAGCTTTAA ATTGATCAAT TCTAAAACTT	9420
ACCCTGTTTC AGGTGGAGAA TTGAACCCAG CAAATGTGGA TTCAGAAATC GAAGCCTTTG	9480
CGCAACTTGG AGTATCACGT GGTTTGGATA GCAAGGAAGC TCACTATCTG GCAAATCTTT	9540
ACGGTTCAAA TGCACCGAAA GTCTTTGCAC TTGCTCACAG CTTGGAACAA GCGCCAGGAC	9600

914

TCAGCTTGGC	AGATACTTTG	TCCCTTCACT	ATGCAATGCG	CAATGAGTTG	ACTCTTAGCC	9660
CAGTTGACTT	CCTTCTTCGT	CGTACCAATC	ACATGCTCTT	TATGCGTGAT	AGCTTGGATA	9720
GTATCGTTGA	GCCAATTTTG	GATGAAATGG	GACGATTCTA	TGACTGGACA	GAAGAAGAAA	9780
AAGCAACTTA	CCGTGCTGAT	GTCGAAGCAG	CTCTCGCTAA	CAACGATTTA	GCAGAATTAA	9840
AAAATTAAGA	AAAAATAAAA	GAGGTGGAGG	GCAGCATTCC	TTGTGCGCCG	TCCCTTCTTT	9900
TTAATGGAGA	CAGAAAGATG	ATGAATGAAT	TATTTGGAGA	ATTTCTAGGG	ACTTTAATCC	9960
TGATTCTTCT	AGGAAATGGT	GTTGTTGCAG	GTGTGGTTCT	TCCTAAAACC	AAGAGCAATA	10020
GCTCAGGTTG	GATTGTGATT	ACTATGGGTT	GGGGGATTGC	AGTTGCGGTT	GCAGTCTTTG	10080
TATCTGGCAA	GCTCAGTCCA	GCTTATTTAA	ACCCAGCTGT	GACCATCGGT	GTGGCCTTAA	10140
AAGGTGGTTT	GCCTTGGGCT	TCCGTTTTGC	CTTATATCTT	AGCCCAGTTC	GCAGGGGCCA	10200
TGCTGGGTCA	GATTTTGGTT	TGGTTGCAAT	TCAAACCTCA	CTATGAGGCA	GAAGAAAATG	10260
CAGGCAATAT	CCTGGCAACC	TTCAGTACTG	GACCAGCCAT	CAAGGATACT	GTATCAAACCT	10320
TGATTAGCGA	AATCCTTGGA	ACTTTTGTTT	TGGTGTGAC	AATCTTTGCT	TTGGGTCTTT	10380
ACGACTTTCA	GGCAGGTATC	GGAACCTTTG	CAGTGGGAAC	TTTGATTGTC	GGTATCGGTC	10440
TATCACTAGG	TGGGACAACA	GGTTATGCCT	TGAACCCAGC	TCGTGACCTT	GGACCTCGTA	10500
TCATGCACAG	CATCTTGCCA	ATTCCAAACA	AGGGAGACGG	AGACTGGTCT	TACGCTTGGA	10560
TTCTCTGTGT	AGGCCCTGTT	ATCGGAGCAG	CCTTGGCAGT	GCTTGATATC	TCACTTTTCT	10620
AGTTTATACT	CTTCGAAAAT	CAAATTCAAA	CCACGTCAGC	GTCGCCTTAC	CGTACTCAAG	10680
TACAGCTTGC	GGCTAGCTTC	CTAGTTTGCT	CTTTGATTTT	CATTGAGTAT	TAGAAAACAA	10740
TTATGTTGAT	AGAGCTTGGG	CAAGAGCCCA	ATTTCAGCAA	AAAATGAAAT	AAATCTTCTC	10800
ATAATAAAAC	GCATCATATC	AAGCACGAAA	ATTCACGAG	GTCAACTACA	GTCAGAAAGC	10860
TGAACAACAA	GCCAAAACGC	CCAAAAAAGG	CGGCAAAAAG	CAAGCACCTG	CAAGCAACGT	10920
GCCGAAATGG	TCAAATCCTG	ATTATGTCAA	CGAATTAGAC	CCAAAAATCG	TTGATATGCT	10980
AGTAGAATTT	CACAAGTCAC	AAGGCACTTT	GGAACCTCCC	GAGGCGCAAG	CAGAAATCGC	11040
CCAAAAACGT	GAAGAAATCG	AGCAAAGGAG	AGCTGAGCTT	GAGGGTAAAA	AACAAGAGCT	11100
TTTGAACCGC	TTGAACAAAT	AGAGTTTCGC	AAGTATTATG	CTTACAAATT	ACTTGAGCAA	11160
TTAACTAAAA	TATAAACCCCT	GCCTTTATAT	CTAGGCAGGG	TTTATATTTT	AGAAATTCAC	11220
GTAGGTTGTT	ACGGTTTTTA	CATACCCAGT	ATAGTTTGAG	TTTCTATAGT	ATTCACTGAT	11280
AAACTTCCAT	TTTCTTTGAG	CAACATGGAT	ATAAGTACTT	GTTATGTAGT	ATGGATATGG	11340
GCTTTGTGAA	TCCAAGTAAG	ACTGATAAGC	TTGTATACCA	AAATATGCTC	CACCAATTAT	11400

915

TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC 11460
 ACCAGTCATG AAGTTAGCGA ATGTGTTAGC TTGTTTATTC CCATGTATTG TGTGACGTA 11520
 ATTCCAAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTCGATTT CATTCTTTTG 11580
 ATAAGCCATA TAAAATGCCC CATTGATATA GACGCCGTCA GCACGTCGTT CAATAGTGTC 11640
 TACTACTCCA TCTGGATTGA CAACCTCAAG AACTTCATCG CTTAAAATAT TTAATTGCGT 11700
 ATCTCCGAAC CGCACTGATG AGCCATTCTC AAACGAGCC TCACCAGATA CAACTTTAGA 11760
 GTTTGCCGAT AAGCTATCAT CAGCAAAAAC AAACAAGCGA CGGGGAAATG CTAGACATAC 11820
 AGAAAACAGA CATAACTAGC AAACACATGC ATTTAAACAT CTTAGACATA ACGGAAACTC 11880
 CTTTGTATTT TTGATTTTTT TCAACTTTTA TTATACAATA AAACCAAATA AAAAGAAAGC 11940
 GGTAACAATA TGCTTAATGC GAAAATTTTT TATATATTTT TATGTTTGAT CGTTATCGAA 12000
 ACTACAGGCT TGTGTGTGTT GAAAAGAGGT CTCGAAATGG GTTATTTAGA CACAGAAGCT 12060
 ATTATCCTCG CAGTTTTTTT ATTTGCTTTT TACAACCTAT GTTCATTCGC TTGGGTCTGC 12120
 TCTACAATAA AAAACAATAA AAAATAAATA GACGTATTTT CAAAAAAAAC maAATGCATA 12180
 TTTATATTAG CAAAACGACG ATTTAAATCG TCGTTTTTTT GTAGTACGAC GGGCATGTCTG 12240
 TATATCTGAG GTGTAAGTCC TCAGCCTGAC TATCGTGAGG TAGCAGGGAG AGGAAGGGAT 12300
 AGCGAAATCG TGGCTCTACG AACAGGAACG TGATAGTAAG GCGTATATAG CCGATAAGGA 12360
 GGCTTCAAAC TCTAAAGTCC AAAAAGGTAG TCGTAACCTA TATGTGTAAA TCACGAGAGT 12420
 AATTGAATTC GGAATAAGGT TTGTGTGAAA AAGATAAATC TTTCTAGAGT CTAAGAGACTC 12480
 TGCGTCAGAT TTCCTATTTT CACTGTAACC TTTTAACGTC CTCATATCTT GTATAAACGA 12540
 GGAAAGATGT ACGACTTATC CCGTGAGGTT TCATGAGCGT GAAAGCGTAG TAACAACGAA 12600
 TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAAACTT CCGTAATGGA AGTGGAGCGA 12660
 AGGGG 12665

(2) INFORMATION FOR SEQ ID NO: 135:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5305 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

CGCTAATCAC TACAATCATT TTATTGTAAT TTTTCACTCT CAAGAAAAGC AAGAAGTATT 60

916

CATTTTAGTT TCATTTAGTA TTATTTTGCA TACCTAAAAT ACAGTAAAAA ATCAGTCATC	120
TTGGTATGCT CCTGCTTTCA CTATTCAACA CGTTTTTGAC TTATACTAGG CTCATTTCCA	180
AAAGCATTAT ATAATAGTGA TATGAAACCA ACTAACTAA ACAAGAAATA TAAGCAATAA	240
AAATTCGTTT AAAAGATCTT ACTAAAGCTA ATACTAAATA AAAATAAAAG AGTAACTAG	300
GAAGTTTATT TCAAACAACC TAAAATACTG ATTTTCGGCT GAAGATAATA CTGGAGTGCA	360
AATTAATGGG GTTATAATAA ATAGCTGATA GCTTGTGTTG GTTTTGGATT TTTTAAGAGT	420
AGATGAGTAT TAAACTATA AGGAGGACGA AGGTGGCTAA AAATTTAAAA TTAAATTTAG	480
CTCGGGTAGA GCGTGATTTA ACACAAGGTC AACTGGCAGA GGCTGTCGGG GTGACACGCC	540
AGACTATTGG TTTAATAGAG GCGGGAAAAT ACAATCCCAG TCTCTCGCTC TGCCAGTCTA	600
TTTGCAATG TTTAGGGAAA ACCCTAGACC AACTATTTTG GGAGGAAGAA GATGAAAAAT	660
AGATTTTATT ATTCTCAATT ACTAGACGAA AGAGAAGAAC AACTGTTCAA TAAAGCGGGC	720
TCTGAAAGTT TCTATATCTG CATTGCTTTG TCGCTCCTAT CTTATATCAT TTCAGTATTA	780
GCACCAAGCC TTTTAAATTC TAATATGCTG CTAATCGTTA TCATCATAGG GACATTTTAC	840
TTTTTCAATC GTGCCCCTTA TCTGGGAGTG ACCTACTATG GTCGTTTTCA TTTTACGATT	900
TTGGGTGTT TTTTCCTAAC CTGGCTATT ACGGCTCTTT TGATGTTGCA GAATTATCAA	960
TTCAACATAG AAATTTATCA GCACAATCCT TTGAATTTTA AATACCTGTC TGCTTGGGTC	1020
ATTACTTATA TCATTTACCT TCCGTGGATC TTTATTGGCA ATCTTGGTCT TAAGAGCTAT	1080
GGCGAATGGG CTCAGAAAAA ATTTGAACAA GATATGGATG AATTGGAGAG TGGAGAATAG	1140
CTTGTTACTC TTTTCTCAAT CCAGCTAAAA TGTGATATAA TAGTACTAAT TTATTGGAAT	1200
ACATGAAAGT TCTTGAAAAA TTTCATGGGT TTCTAGCTAA GGAAGTAGGA AAAGTATGTA	1260
TCCAGATGAT AGTTTGACAT TGCACACGGA CTTGTACCAG ATCAACATGA TGCAGGTTTA	1320
CTTTGACCAA GGGATTCAACA ATAAGAAGGC GGTCTTTGAG GTGTATTTCC GCCAACAGCC	1380
TTTTAAGAAC GGCTATGCGG TTTTGCAGG TTTAGAAAGA ATTGTGAACT ATCTTGAAGA	1440
CTTGCGTTTT TCAGATAGTG ATATAGCCTA TTTGGAGTCG CTTGGTTATC ATGGGGCGTT	1500
CTTGGATTAC CTTGCAATT TCAAGTTGGA GTTGACCGTT CGTTCTGCCC AAGAAGGGGA	1560
TTTGGTTTTT GCTAATGAAC CGATTGTGCA GGTGGAAGGA CCTCTAGCCC AATGTCAGTT	1620
GGTCGAAACG GCTCTTTTGA ACATCGTCAA CTACCAGACT TTGGTGGCGA CGAAGGCAGC	1680
TCGTATTCGT TCGGTTATCG AAGATGAACC CTTGATGGAG TTTGGGACAC GTCGGGCTCA	1740
AGAAATGGAT GCGCCATCT GGGGAACACG CGCAGCTGTG ATTGGTGGCG CCAATGGAAC	1800
CAGCAACGTG CGTGCGGGTA AGCTCTTTGA CATTCCTGTT TTGGGAACCC ATGCCCATGC	1860

917

CTTGGTACAG	GTATTATGGCA	ATGACTATGA	AGCTTTCAAG	GCTTACGCTG	CGACCCACAA	1920
AAATTGTGTC	TTTCTTGTGG	ATACCTATGA	CACCCCTTCGC	ATCGGTGTAC	CAGCTGCCAT	1980
TCAGGTGGCG	CGTGAGCTGG	GTGATCAGAT	TAACTTTATG	GGTGTGCGGA	TTGACTCTGG	2040
GGATATTGCC	TACATTTCTA	AGAAAGTCCG	TCAGCAACTG	GATGAGGCTG	GATTTACAGA	2100
GGCTAAGATT	TATGCTTCTA	ATGATCTAGA	TGAAAATACC	ATCCTTAACC	TCAAGATGCA	2160
AAAGGCCAAG	ATTGATGTCT	GGGTGTGGG	TACCAAGCTG	ATTACAGCCT	ATGACCAGCC	2220
GGCTCTTGGG	GCGGTTTACA	AGATTGTTGC	AATCGAAGAT	GAAACTGGTC	AGATGCGCAA	2280
TACGATTAAG	CTGTCTAATA	ATGCTGAAAA	AGTTTCTACG	CCAGGTAAGA	AGCAGGTGTG	2340
GCGCATTACC	AGTCGTGAAA	AAGGCAAGTC	AGAAGGCGAC	TATATCACTT	ATGATGGTGT	2400
GGATATTAGC	GACATGACAG	AAATCAAGAT	GTTCCATCCG	ACCTATACAT	ACATCAAGAA	2460
GACGGTTCGT	AATTTTGATG	CCGTTCTCT	CTTGGTGGAT	ATCTTCAAAG	AAGGAATATT	2520
AGTTTACAAC	TTGCCTAGTT	TGACTGACAT	TCAGGATTAT	GCCCCTAAGG	AATTGACAA	2580
GTTGTGGGAT	GAGTATAAGC	GTGTGCTCAA	TCCGCGACAC	TATCCAGTGG	ATTTGGCGCG	2640
TGATGTATGG	CAAGATAAGA	TGGACTTGAT	TGATAAGATG	CGCAAGGAAG	CCCTTGGTGA	2700
AGGAGAAGAA	GAATGAGTTT	GCAAGAAACG	ATTATCCAAG	AGCTGGGTGT	CAAACCAAGT	2760
ATTGATGCCC	AGGAAGAAAT	CCGTCGTTCT	ATTGATTTCT	TAAAAAGATA	TCTGAAAAAA	2820
CATCCCTTCC	TAAAAACCTT	TGACTAGGG	ATTTCTGGGG	GACAAGACTC	AACCTTGGCA	2880
GGACGTTTGG	CGCAATTAGC	TATGGAAGAA	CTGCGAGCTG	AAACGGGAGA	CGATAGCTAC	2940
AAATTTATCG	CTGTCCGCCT	GCCATACGGA	GTGCAAGCTG	ATGAAGCAGA	TGCTCAAAAA	3000
GCCCTAGCCT	TCATCCAGCC	AGATGTCAGC	TTGGTTGTGA	ATATCAAGGA	ATCAGCTGAT	3060
GCCATGACAG	CTGCAGTTGA	AGCGACAGGT	AGTCCTGTTT	CAGACTTCAA	CAAGGGGAAT	3120
ATCAAGGCAC	GTTGCCGTAT	GATTGCTCAG	TATGCCCTTG	CTGGTTCCCA	TAGCGGAGCG	3180
GTCATTGGAA	CAGACCACGC	CGCGGAAAAT	ATCACAGGTT	TCTTTACCAA	GTTTGGTGAC	3240
GGCGGTGCGG	ATATTCTCCC	TCTTTACCGC	CTCAATAAAC	GCCAAGGAAA	ACAGCTCTTG	3300
CAGAAACTTG	GCGCAGAGCC	AGCCCTTTAT	GAAAAAATCC	CAACGGCAGA	CCTAGAAGAA	3360
GATAAACCAG	GCCTAGCTGA	CGAAGTCGCA	CTTGGAGTCA	CCTACGCAGA	GATGACGAC	3420
TACCTAGAAG	GCAAAACAAT	CAGCCCAGAA	GCTCAAGCGA	CCATTGAAAA	CTGGTGGCAC	3480
AAAGGCCAAC	ACAAACGCCA	CTTACCCATC	ACCGTATTTG	ATGACTTTTG	GGAGTAAAAA	3540
GGTCCGGGGG	ACCTTTTATG	CTTCTTGCCC	TGAAATTAAA	AAGCAAGAAA	AACCTCCACT	3600

918

GGAGGTTTTTC	AGCCTCTCAT	CTTGAAATAA	GAAAGTGAGA	GAAGGTCTGG	GGGATCTTGA	3660
ACCCCAGATT	TAGAAATAAG	AAAATGAGGC	AGATTCAGTA	ACTCGAAGAG	TTCGATTTCA	3720
TCGTCTTACC	CCTGCAACGA	TGACTAGGTT	TGAAAAAGCT	TGCTAGAGCG	CATTTCAAAC	3780
CAGGCAGCAA	CTGCGTCAAG	AAATTAGAAG	ACAAACTCGT	TTTCTAGCTG	TTACTGAGTT	3840
GAGCCTTTTT	ACTACGAGTA	TAGAAATAAG	GAAGTGAGGT	AGCATCATGA	AATCTATCGG	3900
TACGCAAATA	TTACAGACAG	AACGTTTGAT	TTTAAGAAGA	TTTGTGGAGA	GTGATGCAGA	3960
AGCCATGTTT	CAAAATTGGG	CTTCATCCGC	TGAGAATCTG	ACCTATGTTA	CCTGGGATCC	4020
CCATCCTGAT	GTCGAAATCA	CTCGAAACTC	GATTTGCAAT	TGGGTTGCTT	CCTATACTAA	4080
TCTCAACTAT	TATAAATGGG	CCATTTGTCT	AAAAGAAAAC	CCAGAGCAAG	TAATAGGAGA	4140
TATCAGCATT	GTTAAGATAG	ACGAGGCTGA	TTTAAGCTGT	GAAATTGGCT	ATGTGTTAGG	4200
CAAGGCTTAC	TGGGGAAATG	GTATGATGAC	AGAGACTTTG	AAAGCTATCT	TGGACTTTTG	4260
TTTTACTCAA	GCAGGTTTTC	AAAAGGTCAG	AGCAGGTTAT	GCCAGTCTCA	ACCCAGCTTC	4320
AGGTCGTGTC	ATGGAAAAGG	CTGGAATGTC	CTATCTACAA	ACCATTGTTA	ATGGTGTAGA	4380
GAGAAAAGGC	TATCTTGC GG	ATCTTATTTA	TTATGGTATA	AGTAGGGAAG	AATGTTGAAT	4440
TCTATTTTCT	GTTTCTATCG	AAGTCAACTA	TTTATTGTAA	ATATAATAAT	TAGCATTC CA	4500
AGTTTATTTG	AAACTTTAAA	ATAGCATATT	GATTAGTACA	AGACAGATGT	TCTAGTTCCT	4560
TCTTTAATCT	GGTTTAGTGT	TAGTTAAAAA	ATCGCTTTAA	GCTTGTA ACT	AAGAGGGAGC	4620
TAATCGACTA	GATTCTCCAG	CCGAACAGGI	GGTAATGTAC	TTTTTATAGT	GTAATCCTAG	4680
CTGTTGT TAA	ATTTAAAATA	GAATCCTCTA	TCGAGTTAGG	GAATTAAATT	CAACCAATTT	4740
TATTCATGTT	TTTTCTATCA	AATTATCTAA	TATTAAAAATA	GTCTCATTCT	GATGAGAAAA	4800
CTATTC CCAA	ATCATTCATA	CCTCTCTCAA	CTAGATGTAA	CTTACAAAAC	CCCTGACCTC	4860
ATGAGCCACT	TTCTTCCTCC	TCATGAGGTC	AGTTTTACTT	TCTGCTGTTC	CAGTATCGTT	4920
TTTCCTCGCT	AGATTTCCTC	AAAAGGGCAG	ACTCCTCCCT	TGGTGCGTCA	CACGATTTT	4980
TCATCTCGAC	TGTTCTTTAA	TGCATCATTA	ACGACGCTTT	TCTTCTAGGT	GGTTCATAAG	5040
GAACAGGAAG	ATTCAGGTTG	ACTTTTCTAA	TCCTAGAATA	AAGTGCTGAA	AACAATTCCG	5100
AATAGGCATA	GAGACTAGAC	AATTTGAGGA	GCTGCTTGCG	TCCTGTTCGA	ACACATTTTC	5160
CCACCACGTG	AAGAAAAAGA	TGGCGGAAGC	GTTTGATTGT	TAAAGTTTGG	AAGTCACCTC	5220
CAGCTAGATG	TTTGAGAAAA	AGATAGAGAT	TGTAGGCGAT	ACAGCTCATC	ATCATAACGAA	5280
CTTCGTTTTT	GATTAAGGTT	GAACT				5305

(2) INFORMATION FOR SEQ ID NO: 136:

919

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3964 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

TGGCAGCTCG TCGTCGTAAA GGACGCAAAG TTTTGGCTGC ATAATCCAAA CGAATTCTAT	60
CAAAAATCAG TAGGAACTCG AGTCTACTGA TTTTATTTT TGTAAAAAAG TTCAGTAGAT	120
GCAAATGGAT TCGGAAGCGA TGTTACAGTA GATTGAAACT AGAATAGTAC ACCTCTGTTT	180
CTAAACATTT GPTAGAAATC GATTTGACTG TCCTGATCGA TTTGTCCTGT TATTATTTTA	240
TTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCAA CAATCGTCTT TAAAGATGGT	300
TCAGCTATTA CAATTCCAGG AAATCAATTG GTAGCACAAG ATCCAAAAGC ACAAGATAGC	360
ACTAAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA	420
GATATAACTC ATTTAACAGA TGAAGAAAA GTTAAGGTTG CTATTTTACA AGCAAATGGT	480
TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC	540
CCAGATGGTT CAGTAGTGAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAAGGT	600
GAATCTGTAA CTCAAGAAGC TACACCAGAG TATAAGCTAG AAAATACACC AGGTGGAGAT	660
AAGGGAGGCA ATACTGGAAG CTCAGATGCT AATGCGAATG AAGGCGGTGG TAGCCAGGCG	720
GGTGGATCAG CTCACACAGG TTCACAAAC TCAGCTCAAT CACAAGCTTC TAAGCAATTA	780
GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAGGA CAAGCAGGAT	840
GAAATCAAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA	900
GCAGAAAAAC AAGCAGCTCT CAAAGAGATT GAAATGCGA AAATATGGA AGATGTGAAG	960
GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG	1020
GCTCCTAATG CTGCTCCTAA GACAACAAGT GCACCGCAAG CAACTGCAGG AACAAATGCAA	1080
GATGTTACCT ACCAGTCACC TGCTGGCAAA CAATTACCTA ACACAGGTTC AGCATCAAGT	1140
GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA	1200
AAGACTAGAC GTAGAAAATA GAACAGCTAG AAAATTCTAT TCTCTACTTA AAGTTAGATT	1260
ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAAGT GAGAACCCAA	1320
GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA TGTAGCCAAT CTCTTCTGTC	1380
TCTAACTGTG GAATAGGAGA TGGGCAATAT CGGATAGAAA AGATAGCAGA ATAGCTCTCT	1440

920

ATTGAAGAGA GGAGGGGAAA CCGAAAAATT AGGTGCCCCCT CCTCTTTTTT GGTATAATAG	1500
AAGATAGAAA ACGAGGTTAG AAGAGATGAT TTTTGATACA CATAACACT TGAATGTAGA	1560
AGAATTGCA GGTCTGAGG CAGAAGAAAT TGCCTTGCT GCTGAGATGG GTGTGACACA	1620
GATGAATATT GTTGGTTTG ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA	1680
GTATGAGCAG CTCTATGCGA CTATTGGTTG GCATCCTACA GAAGCTGGTA CTTATACAGA	1740
GGAAGTTGAG GCTTACTTGT TGGATAAGTT AAAACATTCC AAGGTTGTGG CTTTAGGTGA	1800
AATTGGCTTA GATTACCATT GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG	1860
CCGTCAGATT CAGCTATCTA AGGACTTGGA TTTGCCTTTT GTTGTCCATA CCCGTGATGC	1920
GCTGGAAGAT ACCTATGAGA TTATCAAGAG TGAGGGCGTT GGTCTCGTG GTGGTATCAT	1980
GCATTCATTT TCAGGGACGC TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT	2040
TTCTTCTCA GGAGTGGTGA CTTTAAAGAA GGCAACTGAC CTCCAAGAAG CAGCTAAAGA	2100
GTTACCTTTG GACAAGATGT TGGTGAAAC AGATGCGCCT TACTTAGCAC CTGTACCCAA	2160
GCGTGGTCGT GAAAAATAAA CAGCCTATAC TCGCTATGTG GTCGACTTTA TCGCTGACTT	2220
GCGTGGTATG ACGACAGAAG AGCTGGCGGT AGCAACGACT GCAAATGCAG AACGAATTTT	2280
TGGACTGGAC AGCAAGTAAT GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGCGT	2340
GATGATACGG TCAATCTCAA ACGTTATTTT GATGTGAGA CCTATGAGAC TCGAGGTTCT	2400
GCCATCAATG CTCAGGATAT AGAGCGGATT CAGCGCCTGC ACCAACGTCA TGGAGTCATT	2460
GTCTTTACAG ACCCAGATTT TAATGGGGAA CGGATTCGGC GCATGATCAT GATGGTCATT	2520
CCAACAGTTC AGCATGCCTT TCTCAAGCGA GATGAAGCTG TTCCCAAGTC CAAGACCAAG	2580
GGGCGTTCTC TGGGAATTGA GCATGCCAGC TATGAAGACC TGAAAACGGC TCTAGCTCAA	2640
GTGACAGAAC AATTTGAACA TGAGAGTCAG TTTGACATTA GTCGTAGCGA TTTGATTCGC	2700
CTTGGTTTTT TAGCAGGGGC AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC	2760
CGAATCGGCT ATTCCAACGG CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTACT	2820
TTGGCAGAAG TGAAGAAGC TATGAAATCT TATGAGTAGG AAAGATGTAG CCGTTACAAT	2880
TTTTTAAGTT TCACAGTATT TTTCGAAGCA GGTAGAAGAG GAGGCGTCTG ATGTTAATTG	2940
GTCAAAAAAT TAAAGAGATT CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG	3000
ATGAGCAAGA ACTGACAGTT CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA	3060
GTTTGCCCAA GTTAGACTAT ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC	3120
CGGATTTTTC AGCTCTTCCT TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC	3180
CAATCTATGG TAAAGAAGAG GAGTACGATA AGAAGGAAGC GTGTTTGAA GAGATTTATA	3240

921

AAACATACTT TGATAATCTT CCTAAAGAAG AACCAATTAGC ATGTGAAGTA TTGCAGGCGT	3300
GTTTGGATAC TTCTAGAACT AGAAGGCCTG AATATGCAGA GTTAATACTT GAGGAACATA	3360
TGCCTCAGAT TATAGAAAAA GAAGCTTATT CAATAAATGA TATGTTGTTG ATTCGTTTGT	3420
TTTTTTATCA AATGCTCATT AGAAAAGATC TTGCCAAATT TATAAATCAA ATCGAAAAGC	3480
TAATGCTCTT TCTTTTGGAA CAGAAGAAGG TAACTCAAAT AGAGAATTAC TTTATAATTA	3540
GAGATACTCT TATTTTCAGGA ATGTGTTGTC TTGAAAAGGT AGGAGTAACT GATTGTTTTA	3600
ATGATTATCT ATCGTGTTTA CAAGAAATTA TGGATAAAAC TCAAGATTAT CAAAAGAAAC	3660
CTCTGTATTT TATGTTTTTG TGGAAAGCAAG CATTAAGAGA AGAAAGAGAT TTTAGTTTAG	3720
CTGAATCATT TTATCAGTCT TCTAAAACAT TTGCGCAGCT AATTGGAGAT GAATTTCTAG	3780
TAAAGAAATT GACAGAGGAA TGGCAAGAGG ATGTCAAAAA ATATTTATAA ACATAGTGAA	3840
TCAGTGACAA AGATGTCCTT GTCCTCGTAT CAAAACAGTT CTAAAGTTCG TCTTTAGGGA	3900
TGTTTTTTTA GATATAAGCT AAAAATGACA CGAAATGGTT AGATTTTAAG GACATTGATG	3960
TCCG	3964

(2) INFORMATION FOR SEQ ID NO: 137:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12666 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT ATTTGTATTA GGGAAATGGG TATCTATTTT TAATGCTGTG GGGATTTTGA	60
TTGTTTCTAT TATTCAAACC AAAAGCTTGT CAGGTATTGG AGCAGGATTG TTAAATCTAT	120
ATAACATTTC ATCTTATATA GGTGATTTAG TTAGTTTCAC TCGATTGATG GCATTAGGAT	180
TATCTGGAGC AAGTATAGCA TCAGCTTTCA ATTTAATTGT TGGTTTGTTC CCGGGAATAT	240
TGGCTAAACT GACAATTGGA TTAGTATTAT TCATTCTTTT ACATGCCGATC AATATTTTTC	300
TATCGTTACT ATCAGGATAT GTTCATGGAG CACGTCTGAT ATTTGTTGAA TTTTTTGGTA	360
AGTTTTATGA GGGTGGAGGA AAACCATTTT AACCTTTGAA GGCTTCTGAG AAATATATTA	420
AGGTATTATC AAAGAATTAA TGGAGGATAT ATATAATGGA ACATTTAGCA ACTTATTTTT	480
CAACCTATGG AGGAGCTTTC TTCGCTGCAT TGGGAATTGT ATTGGCGGTT GGATTAAGCG	540
GTATGGGGTC TGCTTATGGA GTTGGTAAGG CTGGGCAATC TGCCGCAGCT TTA CTGAAAG	600

922

AACAGCCTGA	AAAGTTTGCC	TCAGCTTTGA	TATTGCAATT	ATTGCCCGGA	ACACAAGGAT	660
TATATGGTTT	TGTTATTGGA	ATTTTAATTT	GGTTGCAATT	AACGCCAGAA	CTTCCTTTAG	720
AAAAAGGCGT	TGCTTATTTT	TTTGTAGCTC	TTCCAATTGC	TATTGTAGGA	TACTTTTCAG	780
CTAAGCATCA	AGGAAATGTA	GCAGTAGCGG	GAATGCAAAT	CTTGGCTAAA	AGACCAAAAAG	840
AATTCATGAA	GGGAGCAATT	TTAGCTGCCA	TGGTAGAAAC	CTATGCAATT	CTTGCTTTTG	900
TCGTATCATT	CATTTTGACC	CTTCGTGTAT	AAGAAATAAA	TTTGCAATTC	AAAGGAGGTG	960
TCTAAATGAG	CAATTTAGAA	AACCTACGAG	AGTCTGTTAT	TGAACAAGCT	CATGAAAAAG	1020
GGCGTATGAA	ATTATTGGAT	TCCAAAAAGA	AGATTGATGA	TGAATTTGAA	ATGCAAAAAGT	1080
CGCTCATTAT	AAAGAAAAAA	GAAGCTGAAC	ATGAACGAAA	GTTAAAAGAA	TTGCAACAGA	1140
AATATCAAAT	AATTTTTCAA	CAATTAAAAA	ATAAGGAACG	CCAATCAACG	TTAGTATCAA	1200
AACAGAAAAT	ATTAAAAGAA	CTTTTTCAT	CTGCTTTACT	AGAAATGGAA	TCTTGGAGTG	1260
CAGATAAAGA	AATGGAGTTC	ATCTATCGAA	TTCTGGAACG	ATATTCACAA	CAAGAGGTCA	1320
TAGTAACCTT	TGGGGAACGG	ACTTTAGCTA	AATTCAAATT	GGAACAATTA	GAGAAATTGA	1380
AATTCCTCTT	TCCAAATTAT	TTATTTAGTG	AACAACCTAT	CTCAAAATGAA	TCAGGCTTAC	1440
TTATTTCAAT	AGGTAAAAAT	GATGATAACT	ATTTGTATAA	AACATTAATT	GGATCGATTT	1500
CTAAGGAAGA	AAGTTCAAGT	ATCGCAAATC	AAATTTTAT	CAATTAAGGA	TGAAATTGGT	1560
TAATCCTTCT	TAGAAATTTG	GAGTATTCCA	ATAAAATTAG	AAAGGTATTT	TATGGATACT	1620
AATCTTTTTT	CAAAAAATAA	TACGACGATT	TCGGTAAAAG	AAAACGATTT	TATTACAGAA	1680
GAAAAATTTT	AAAAAATTAT	ACAATCCAAA	GATACGGAGA	CATTGGCATT	TATCTTAGAA	1740
TCAACTCCCT	ATCATTTATC	GATTGACATC	TTAGAAGATC	CTAGTCAGAC	AGAGATTTTCG	1800
CTAATGACAA	AATTAGTCAA	TGATTATAGA	TGGGCCTATG	CTGAAAGTCC	GTCTGATATA	1860
ATTGTGACTT	TATTTGCTTT	ACGATATGTT	TATCATAATA	TCAAAGTTTT	ATTAAAATCT	1920
AAGGCGGCAA	TTAAGAAAGA	TTTTTCTAAA	TTATTAATTC	CAATAGGGAT	TTTTGATATA	1980
GAAAGTTTAA	AACATTTAGT	TTCTTCCTTA	CATTCAGATA	CACTTCCTGA	TTTTATGGTT	2040
CGTGAAGTAG	AATCAATTTG	GAATGAGTAT	GAAACTTTTA	ATAATATTCG	TGTACTTGAT	2100
GTCCGAGCTG	ATCTAGCATA	TTTTAAACAT	CTGAACTTTT	TATCTAATGA	GTTAGATGAG	2160
GTACTGTCTC	AGGTATTGTG	CGAAATGATT	GACTTTTATA	ATATTATTAC	TGTAAAACGT	2220
GGTTTATCTC	AAAATAAGAG	TCATGGGGAT	ATTTTACAAT	TACTTTTCAGA	TGAAGGAAGT	2280
ATTTCTGCTA	AAGAAATTAT	ATACATTGTA	GAAAAATCAAG	AAATATTGTG	GTGGTTCAAT	2340
AAAATAAATC	CAAGCTTAGA	TTCAATCTTT	TCAACTTATG	AATTGAAGAT	GCAGGACGCA	2400

923

ACAATTTTCAT CTTCTGAGTT AGAATTTTFA TGTGATTTAC TATTGTATAA AACTTTAGAT	2460
CAAGGAAGGT ACAATGTAGA GGGGCCGTTA GTTCTTGCTA GATATTTATT GGGATGTGAG	2520
TTTGAAGTAA AGAATCTCAG AATGATCATA TCAGCTCTTC AAAATACAAT TCCCTTTGAA	2580
TCAATAAAAG AAAGGATACG CCCACATTAT GGAAGCTAAT AAGTATAAAA TTGGCATAAT	2640
TGGTAGCCGT GATATTATTT TACCATTAG CATGATTGGG TTTGATATAT TTCCTGCCTA	2700
CCAAGAACAA GAAGCTATAA ATACACTAAG AAAATTAGCT CAATCTGATT ATGGTGTCAT	2760
TTATATCACT GAAGACATTG CTTCAATGAT ATTAGATACA ATTCGCCATT ATGATTCCCA	2820
AGTTGTGCCT GCTATTATTT TATTACCGAC TCATAAACAA GGTTTAAATT TAGGATTAAA	2880
ACGTATAGAG GATAATGTAG AGAAAGCAGT AGGACACAAT ATTTTATAAT AATGTACAAA	2940
ATTGTCGTGA ATATTATTCT ATAATTTTG GACTTAGTAA GGAGAATAAC TTTGACTCAA	3000
GGGAAGATTA TAAAAGTATC GGGACCTCTA GTTATTGCAT CAGGTATGCA GGAGGCTAAT	3060
ATTCAAGATA TTTGCCGTGT AGGTAAGCTA GGGTTAATCG GTGAAATTAT TGAAATGAGA	3120
AGAGATCAGG CATCTATCCA AGTCTATGAA GAAACATCTG GTCTTGGTCC GGGAGAACCT	3180
GTTGTTACAA CTGGAGAACC TCTCTCGGTT GAATTAGGGC CAGGATTGAT TTCTCAAATG	3240
TTTGATGGCA TACAACGCCC ATTAGATCGA TTTAAATTGG CTACTCATAA TGATTTTCTA	3300
GTTCGTGGGG TAGAAGTTCC AAGTTTGGAT AGAGATATTA AGTGGCATT T GATTCCACT	3360
ATAGCAATTG GTCAAAAAGT GAGTACGGGT GATATTCTTG GAACTGTCAA GGAAACCGAG	3420
GTAGTTAATC ATAAAATTAT GGTTCCTTAT GGAGTATCTG GAGAAGTCGT TTCTATTGCA	3480
TCTGGCGATT TTACAATTGA TGAAGTTGTA TATGAAATAA AAAAATTGGA CGGTAGTTTC	3540
TATAAAGGAA CGCTTATGCA AAAATGGCCT GTCCGCAAGG CGCGTCCTGT TTCTAAACGT	3600
TTAATTCCAG AAGAACCATT AATCACAGGT CAACGAGTTA TTGATGCATT CTTTCCAGTA	3660
ACCAAAGGGG GAGCTGCAGC AGTTCCTGGA CCGTTTGGAG CAGGAAAGAC AGTTGTACAA	3720
CACCAAGTAG CTAAATTTGC CAATGTTGAT ATTGTTATTT ATGTCGGTTG TGGAGAACGT	3780
GGAAATGAAA TGACGGATGT ACTGAATGAG TTTCTGAGT TGATTGACCC TAATACCGGA	3840
CAATCAATTA TGCAACGGAC AGTTCTGATT GCTAATACTT CAAATATGCC TGTGCTGCT	3900
CGTGAGGCTT CAATTTATAC AGGAATTACC ATGGCTGAGT ATTTTCGTGA TATGGGCTAC	3960
TCTGTCGCCA TTATGGCTGA TTCAACTTCA CGTTGGGCAG AAGCGCTACG TGAAATGTCA	4020
GGACGTCTAG AAGAAATGCC TGGTGATGAG GGTATCCTG CTTATCTGGG AAGTCGTATC	4080
GCTGAATATT ATGAAAGAGC AGGACGTTCT CAGGTTCTAG GGCTTCCAGA ACGTGAAGGA	4140

924

ACGATTACTG	CTATTGGAGC	TGTATCGCCA	CCTGGTGGAG	ATATTTTCAGA	ACCAGTFACT	4200
CAAAACACTT	TACGGATTGT	GAAAGTTTTT	TGGGGGCTTG	ATGCTCCGTT	GGCACAGCGA	4260
CGTCATTTTC	CTGCAATTAA	CTGGCTTACA	TCTTATTCAC	TATATAAAGA	CAGTGTGGGC	4320
ACTTATATAG	ATGGTAAAGA	GAAGACAGAT	TGGAATAGTA	AAATAACTCG	TGCGATGAAC	4380
TACTTACAAC	GGGAATCTAG	TTTAGAGGAA	ATTGTTTCGTC	TTGTTGGAAT	TGATTCTCTG	4440
TCTGATAATG	AACGACTAAC	GATGGAAATT	GCTAAACAAA	TTGAGAGAAG	TTATTTGCAA	4500
CAGAACGCTT	TTGATTCGGT	AGATACATTC	ACTTCGTTTG	CAAAACAAGA	AGCAATGCTA	4560
AGTAATATTC	TCACTTTTCG	TGATCAGGCA	AATCATGCTT	TAGAGTTGGG	TTCTTACTTT	4620
ACAGAGATTA	TGGAAGGTAC	CGTGGCAGTT	CGAGACCGTA	TGGCGAGAAG	TAAATATGTT	4680
TCAGAAGATA	GATTAGATGA	AATCAAAATT	ATATCAAAATG	AGATTACACA	TCAAATTCAT	4740
TTGATATTAG	AAACAGGAGG	TCTATAAATG	AGTGTATATA	AAGAATACAG	AACTGCTAGT	4800
GAAGTTGTTG	GGCCTCTTAT	GATTGTTGAA	CAAGTAAATA	ATGTGTCTTA	CAATGAGTTA	4860
GTTGAAATTC	AACCTCATAA	TGGAGAAATT	CGTCGTGGAC	AAGTTTTAGA	GATCCACGAA	4920
GATAAAGCAA	TGGTTCAGCT	TTTTGAAGGA	TCTAGTGGAA	TAAATTTAGA	AAAGTCTAAA	4980
ATTCGTTTTG	CTGGTCATGC	ATTAGAATTG	GCTGTATCTG	AGGATATGGT	TGGTCGTATT	5040
TTTAATGGGA	TGGGAAAACC	AATTGATGGT	GGACCAGATT	TAATTCCAGA	GAAATATTTA	5100
GATATTGATG	GTCAAGCTAT	TAATCCTGTA	TCTAGAGATT	ATCCAGATGA	ATTTATTTCAG	5160
ACAGGGATCT	CCTCTATTGA	TCATTTGAAT	ACTCTTGTA	GTGGTCAAAA	ATTACCAGTA	5220
TTTTCAGGTT	CGGGCTTACC	TCATAATGAA	TTAGCTGCTC	AGATAGCAAG	ACAAGCGACT	5280
GTTTTAAATT	CTGATGAAAA	TTTTCGGGTT	GTATTTGCAG	CAATGGGTAT	TACTTTTGAA	5340
GAAGCTGAGT	TTTTTATGGA	AGAACTCAGA	AAAACAGGAG	CGATCGATCG	TTCGGTTTTA	5400
TTTATGAACT	TGGCAAATGA	TCCTGCAATT	GAGCGTATTG	CAACTCCCCG	CATTGCTTTA	5460
ACTGCGGCAG	AGTATCTAGC	TTTTGAAAAA	GATATGCACG	TTCTAGTTAT	CATGACGGAT	5520
ATGACTAACT	ATTGTGAAGC	GTTACGTGAA	GTCTCGGCAG	CTCGCCGTGA	AGTTCCAGGG	5580
AGACGAGGCT	ATCCGGGATA	TTTATATACA	AATTTATCAA	CTCTATACGA	AAGGGCTGGT	5640
CGCTTAGTTG	GTAAAAAAGG	TTCGGTGACA	CAGATTCCTA	TTTTAACAAT	GCCAGAAGAT	5700
GACATAACAC	ATCCAATTCC	TGATTTAACT	GGATACATTA	CTGAAGGGCA	AATTATTTTG	5760
TCGCATGAGT	TGTATAATCA	AGGTTATCGT	CCACCAATCA	ATGTTTTACC	TTCTCTCTCT	5820
CGATTAAAAG	ATAAGGGATC	TGGAGAAGGT	AAAACCTCGT	GAGATCATGC	TCCAACATATG	5880
AATCAACTGT	TTGCAGCCTA	TGCCCAAGGG	AAAAAGGTTG	AAGAGTTAGC	AGTAGTATTA	5940

925

GGAGAATCGG CTTTATCTGA TGTAGATAAA TTGTATGTGA GGTTTACAAA GCGTTTGTAA	6000
GAAGAGTACA TAAACCAAGG ATTTTATAAA AATCGAAATA TAGAAGATAC GTTGAATCTT	6060
GGGTGGGAAT TACTATCAAT TCTTCCTAGA ACAGAGTTAA AACGTATCAA AGATGATTGT	6120
CTTGATAAAT ACTTACCTTT GGTAGAAGTT TAATCCGGAA ATGGAGTGAT TATCTATGGT	6180
ACGTTTGAAT GTAAAACCAA CTCGTATGGA ATTGAATAAC TTAAAGGAAC GTTTGACAAC	6240
AGCTGAACGT GGACATAAGT TATTAAAGGA TAAAGAGAT GAATTGATGA GGCGATTAT	6300
TTCTTTGATT CGTGAGAATA ATCAACTTCG GAAAGAAGTG GAAAGTTATC TAATTGATAA	6360
TCTAAATCC TTTGCAGTTG CTAAATCATT AAAGAATTCT CAAATGGTGG AGGAATTATT	6420
TTCAATTCCA TCGAAAGAAA TTGAATTATT TGTGAGAAA GAAAATATCA TGAGTGTAAC	6480
AGTTCCTAGA ATGCATATGA ATATTACTTC TCAAAATGAG AACAGTGAAT ACAGCTATTT	6540
ATCTTCTAAT AGTGAAATGG ATGATGTATT TGCTACAATG AATAGTTTAA TTTATAAATT	6600
ACTAAGACTG GCAGAAAGTTG AAAAAACGTG TCAGTTAATG GCTGATGAAA TAGAAAAAAC	6660
ACGTAGACGT GTAAATGGTT TAGAATACTC GATTATTCCA AACTTGTCGG AAACATATCA	6720
TTATATAGAA TTGAACTAG AGGAGGCAGA AAGAGCCAAT TTAGTTCGTA TTATGAAAGT	6780
GAAGTAGATC CTTTATTTAG ATTATTAATT AGATGAACAA ATATCAGCTT GGATAAGGCT	6840
TTAAGCCTTT CTAAGCTTTT TTTATTGACA GTATCAGGAT ATCTTTTCA AAATTTGGT	6900
TTGTTAGATA ATGAAAATGT TTCTACTAAT CTAGATTAG GATTAGTAAA TCGTAAATGT	6960
AATTATATAG AAAGTAAGCG CGTCATAACA AGGTATCTAT CATTATGGA GCTCCTCTG	7020
TATACTATTA GTAAAGTAAA ACTATTGGAG GATATTTTAA TGCCACAACC TATTGTTCCCT	7080
GTAGAGATTC CACAATCTCG TCGTTTGTAT TCTAAAAAGA GAAATGATAT TCTGCTTAAA	7140
ATTCGTATTG GCAAGCTTGA AGTAAGTTT TTTCAATCTC TCAATCTCGA AATGGTAGAA	7200
CAGCTTTTGG ATAAGGTGTT GCTCTATGAC AATTCATCTA TCTAGCCTAG GGGAGGTCTA	7260
TCTCGTGTGT GGGAAAACGT ATATGAGACA AGGAATCGAT TCACTGGCTT ATCTGGTTAA	7320
AACCCACTTT GAATTGGATC CTTTCTCCGG TCAAGTCTTT CTCTTTTGTG GTGGACGTAA	7380
AGACCGCTTT AAAGTCCTTT ACTGGGATGG TCAAGGATTT TGGCTACTAT ATAAACGCTT	7440
TGAGAACGGC AGATTGATTT GGCTAAGTAC AGAAAAGGAT GTCAAAGCTC TCACACCAGA	7500
ACAAGTAGAC TGGCTTATGA AGGGCTTTTC TATCACTCCA AAAATATAGT AGATTGAAAC	7560
TAGAATAGTA CACCTCTGCT TCTAAAACAT TGTTAGAAAT CGATTTTACT GTCCCTGATCG	7620
ATTTGTCTCG TTCTTATTTT ATTTTACTAT AAATCCATCA GAAAGTCGTG ATTTCTATTG	7680

926

AAATGAGGAC TTTCTTTTTA TACTCATCTG CTTTCAAAAA GCATTCTAGT CCATCTCCGA	7740
TTAACGATGG ACTTTATCAC CTCCTTCTCC AGTCCTTGTA TAACATCTTG GAGTTGATTC	7800
ATGACATCTT CCAAAGTTTA AAAGGCTTTA TTCTTAAATC CACGTTTACG AATCTCTTTC	7860
CACACTTGTT CAATGGGGTT CATCTCTGGT GTGTATGGAG GAATAAATGC AAAGCCAATA	7920
TTAGTCGGAA TCTTTAAGGT ACTTGATTTA TGCCATATAG CATGTGCCAT AACGAGTAA	7980
AGATAATCAT CTGGATAAGC TTGTGAAATC TCCTATTCCT AAAGCCCCCT TAGCGCATAA	8040
CTTTGGCTCA GCTTCTATTA TCGCTCACAC CATCCATCAG AAGTTTAAATC TGAAGGTACC	8100
CAATTATCGC CAAGAAGAAG ATTGGGCTAG GATGGGTTTA CCAATCACAC GTAAGGAAAT	8160
CTCTAATTGG CATATCAAGG CGAGTCAATA CTATTTGGAG CCCCTTTATA ACCTCTTGCG	8220
AGAGAGACTA TTGACTCAGC CCTTACTTCA TGCGGATGAA ACTTCTTATA GGGTGCTAGA	8280
GAGTGATAGT CAGCTGACTT ACTATTGGAC TTTTGTGCA GGTAAGCAG AGAAACAAGG	8340
GATTACGCTT TACCACCATG ATCAGTGTGC AAGTGGTTCA GTAGTACAAG AATTCCTAGG	8400
AGATTATTCT GGCTATGTGC ATTGTGATAT TTTGCGGCAG TAACTTAGGA CTTTAGTCCT	8460
CTAGTTCTGC CTATGCGATA GCAGTCCAAG GTTTAGGAGC AAGGCGACGC TAAGCTTGGT	8520
AAACTTCGAA CCGCTCGTCT GCTTATCGTC AACTGGAAGA AGCTGAACTT GTTGGATGTT	8580
GGGCGCATGT GAGAAGGAAG TTTTGTGAAG CGCCCCCA AGCAAGCGGA TAAATCATCC	8640
TTAGGAGCTA AAGGTTTAGC TTATTGTGAT CAGTTATTTT CCTTGGAAAG AGACTGGGAG	8700
GCTTTGCCAG CTGATGAACG ACTACAGAAA CGTCAAGAAC ATCTCCAGCC CTTAATGGAA	8760
GACTTCTTTG CTTAGTGCCG GCGTCAGTCA GTTTTAGCAG GTTCAAACT AGGAAGGCA	8820
ATTGAATACA GCCTCAAGTA TGAAGAAACC TTAAAGACCA TTTTGAAAGA CGGACATCTG	8880
GTCCTTTCCA ATAATCTAGC TGAACGCGCC ATTAAATCAT TGGTTATGGG ACGGAGTAAA	8940
AGAGTCCAGT GGACTCTTTT AGCCTAAGCT CAGTTTAAAA AAGCGAGGGT GGTATTTTC	9000
TCAAAGTTTT GAAGGAGCTA AAGCAAGAGC TATTATTATG AGTTTGTGG AAACAGCTAA	9060
ACGTCATCAA TTAAATAGCG AGAAATATCT ATCCTATCTT CTAGAATGTC TTCCAAACGA	9120
GGAAACTCTC GTAAACAAAG AGGTTTGA GAAGTTATTA CCATGGACTA AAGTTGTACA	9180
AGAAAAGTGC AAATAAGAAA TCTCCAGATT AGGAACTATC CGTGAGTTCT CCAGTCTGGA	9240
GATTTTTCAT TAGACTTCCT GCGAAACAAA ATATGGTATA ATAGTTCTAT GAATGATGAA	9300
GCAAGTAAAC AACTAACCGA TGCACGATT AAGCGTCTTG TTGGTGTCA ACGCAGGACT	9360
TTTGAAGAGA TGTTAGCTGT ATTAAAAACA GCTTATCAAC TTAACACGC AAAAGGTGGA	9420
CGAAAACCTA AATTAAGTCT AGAAGACCTT CTTATGGCCA CTCTTCAATA TGTGCGAGAA	9480

927

TATCGAACTT ATGAACAAAT TCGGGCTGTT TTTGGTATTC ACGAAAGCAA CTTAATCCGT	9540
CGGAGCCAAT GGGTTGAAGT AACTCTTGTT CAAAGTGGTG TTACGATTTC AAGAACTCCT	9600
CTCAGTTCTG AGGACACGGT AATGATTGAT GCGACGGAAG TAAAAATCAA TCGCCCTAAA	9660
AAAAGAATTA GCGAATTATT CTGGTAAAAA GAAATTTTAC GCTATGAAGG CTCAAGCGAT	9720
TGTCACAAGT CAAGGGAGAA TTGTTTCTTT GGATATCACT GTGAACATTT GTCATGATAT	9780
GAAGTTGTTT AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG	9840
TGGTTATCAA GGGCTCATGA AGATATATCC TCAAGCACAA ACTTCACGTA AATCCAGCAA	9900
ACTCAAACCG CTAACAATTG AAGATAAAGT CTATAACCAT GCGCTATCTA AGGAGAGAAG	9960
CAAGGTTGAG AACATCTTTG CCAAAGTAAA AACGTTTAAA ATGATTTCAA CAACCTATCG	10020
AAATCATCTA AACGCTTCGG ATTACGAATG AATTTGATTG CTGGTATTAT CAATCATGAA	10080
CTAGGATTCT AGTTTTCAG GAAGTCTATT ATCAAAAAATA CCATCAAGAT TATATAAGAT	10140
TGATACAGGA AAAGTTTAT TTGATGGTGT AAATATTAAT CAAATAGATA AAAAAATATT	10200
AAGTCAAAAT TTAGGAGTAG TTCCACAGGA TTCATTTTTA TTGAACCGAA GTATTCTTGA	10260
TAATATAACT TTAAAGCACG AAGTTACTTC ACAAAGATA GAGGAAGTTT GTAAAGCAGT	10320
TCAAATCTAT GATGAAATCA TGGCTATGCC GATGAAATTT AATACTATCA TCTCAGAGAT	10380
GGGGTCAAAT ATTTAGGTG GGCAGGCA ACGGATAGCA CTGGCACGTG CATTAATAAA	10440
TAATCCTAGT ATTGTAATTT TAGATGAAGC AACTAGTGCA TTAGACACTA TTAATGAGGA	10500
AAGAATAACA AAGTATATAC AAAGTCAGGG CTGTACTCAA ATAATTGTAG CTCATAGATT	10560
GTCAACGATT AAGGATGCGG ATGTTATTTT TGTAATGAAA GGTGGTAAGA TTGTTGAGTC	10620
AGGAAATCAT AAGTACTTAA TGGATCTTGG TGGAGAGTAC TACAGCTTAT ATACAAAAAG	10680
GAAATGAGGT GTAAAGAAAA TGAAGAAAGA AAATGAATAT GTAATTTTAA CAACAGCCTC	10740
ACTAGGGGTG ATGATTGGAA TAGTGTTCG AATTTTTTTA GATTTTCCAG TTGAATATGG	10800
TATTTCTTTA GGCTTGTTGA ATGGAATAGT ATTGGGTTTCG CTGATTGTTT AAAAAACAA	10860
TAAGAATTAA GCATAATTTT TTGCTGTAAA CTAAGGAGTA GAGATGGCTA TAGTTGAAAT	10920
TATAAATCTA AAAAAAGCT TTAAAGATAT TGAAGTTATT CATAACACTT AAATAATAGA	10980
GCAACTACAG TAGTAGCTTA AAAACATGAT TAAATCGCTA TTCTTAGGAG TAGCGGTTTT	11040
TCTTTTGTG TAATACTCTT TGAAAACTC TTCAAACAC GTCAGCTTTG CTTTACCGTA	11100
CTCAAGTACA GCCTGCGGCT CGCTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATAAAA	11160
AGGGTCAAGT AAGTATAGTA AATTGAAATA AGATATGAAC AAATCGATTA GAAAAGTCAA	11220

928

ATTAATTTCT AGAAATATGT TAGAAATTGG TTTGAATTCC GCAATCAATT TGTTCAGTTT	11280
TTATTTTCATT TCATTTTATT TAATTAGATT TTCCAATTTT TTAATTCAAG CTA AAAATCC	11340
CCAATCGTAG TGATTGAGGA TTGAGTAAAT AAATCTTAAA CAATACCTTG TGCAATCATG	11400
GCATTTGCTA CATTTTCAAA GGCAGCAATG TTAGCTCCTG CAAGGTAGTC TTTATCAAGA	11460
CCGTATGTTT CTGAAGTCGT TTTAGCTGTG TTGAAGATGT TTGTCATGAT GTCTTTGAGA	11520
CGGCCATCAA CTTCTTCACG AGTCCATGAG AGGCGAAGAC TGTTTTGGCT CATTTCAAGA	11580
GCTGAAACGG CTACACCACC AGCGTTGGCA GCTTTTGACG GTCCGTAGAA GATACCATTT	11640
TCTTTGTAAA CTTTGATGGC ATCAAGGTCG CTCGGCATGT TGGCACCTTC AGATACACAG	11700
ATAACGCCCTT GAGCAACCAA ACGTTTAGCT GCTTCACCGT TGATTTGCTT TTGAGTGGCA	11760
CATGGAAGAG CAATGTCATA GTTCCACGG TAAGTCCATA CAGTACCTTC GTGGTAGGTT	11820
GCAGTTGCTT TTTGAGCTGC ATACTCAGTC AAACGAGCAC GACGTTTTTC TTAAACATCA	11880
ACCAAAAGAT CGAAGTCGAT ACCATTTTCA TCGATGACAT AACCATTTGA GTCAGAAACA	11940
GAAATAACAG TTGCACCGAG TTCAGTTGCT TTTTGAAGAG CATATTGAGC AACGTTACCA	12000
GAACCTGAAA TAACGACTTT CTTACCAGCA AAGCTGTTAC CGTTAGCTTT GAGCATTTCT	12060
TCAGTATAGT AAACCAAACC GTAACCAGTT GCTTCTGGAC GAATCAAGCT ACCACCAAAT	12120
CCAAGAGGTT TACCAGTCAA GACACCAGCA TCAAATTGGT TAAGACGTTT GTATTGACCG	12180
TAAAGGTAAC CAATTTACAG TCCACCAACA CCGATATCAC CAGCAGGTAC GTCAAGTGAT	12240
GGTCCGATGT GTTTTTGCAA TTCAGTCATG AAGCTTTGGC AGAAGCGCAT CACTTCAGCA	12300
TCTGTTTTAC CTTTAGGATC GAAGTCTGAT CCACCTTTAC CTCCACCGAT AGGAAGTCCA	12360
GTCAAGACAT TTTTAAAGAT TTGTTCAAAT CCGAGGAATT TCAAGATCCC TTGGTTTACA	12420
GTTGGGTGGA AACGAAGTCC ACCTTTGTAT GGTCCAACAG CTGAGTTGAA TTGAACACGG	12480
TAACCACGGT TTACTTGAAT TTTTCCATCA CGGTCAACCC AAGGAACACG GAAAGAAAACC	12540
ACGCGCTCAG GCTCAGTAAT ACGTGCCAAG ATATTTTCTT CGATATACTC AGGGTGTTTT	12600
TCAAATACAG GTTCTAAAGT GTTGAAAAAT TCTTCAACAG CTTGGAGGAA TTCAGCCTCG	12660
TGCCCG	12666

(2) INFORMATION FOR SEQ ID NO: 138:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 3083 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

929

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTAAATAGA GCCATTTTGA	60
CCAAAAATCC CGATAAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA	120
ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGGTCA AAAAGAGGGC CGTCGGATAA	180
CTGATAAGCA GTGCCACAAA GGTCACAATG CCTGCATAAA GCACTGAGTT GAAACTCATT	240
TTAAGATAGG TCAAGTTTGG TGACGCAAAG TAAGATTTGT AATTTTCTAA ACTGAACTGG	300
CCTTCGATGT TGAAAAAGGA TTGACCGAAA ATCAAGACCA AGGGTGCCAA TACAAAGAGC	360
GCAATCCAAA GCATGTAGGG TACTACAAAG AGTTTAGAGC TTGTTTCTCT CATCTCTTTC	420
CTCCTCGATT GCATTGATCA AACCTGCTTC TTGCTCTTCG ATTTCTACGT ACTCCTCAAT	480
ACGAGCATCG AACTCTTCTT CGGTTTCATT GAGACGCATG ATGTGGATGT CTTCTGGTTC	540
AAAGTCCAGA CCGATTTCCCT CACCCACGAT AGCCTTACGG GTTGAGTGGA TCATCCATTC	600
ATTTCCAAGT TCGTCATAGG CGATAATTTT ATAATGAACT CCACGGAAAA GCTGGGTATC	660
GACCTTAACT TGGAGCTTGC CTTCTTCAGG AAGGGTAATG CGCAAGTCCT CTGGACGAAT	720
AACGACCTCA ACAGGTTTCAT TTGGCTTCAT CCCACCATCA ACCGCTTCAA AGCGTTTGCC	780
GTTAAATTCG ACCAAGTAGT CCTCAATCAT GGTACCTGGC AAGATGTTTG ACTCCCCGAT	840
AAAGGTGGCA ACAAAGTGGT TGATTGGCTC ATCGTAGATG TCCACAGGGG TTCCAGACTG	900
GACAACTCTG CCATCATTCA TAACGAAAAT CCAGTCACTC ATGGCAAGAG CTTCTTCTCG	960
ATCGTGAGTG ACAAAGACAA AGGTAATGCC CAATCGTTGT TGTAATTCAC GCAATTCGTA	1020
CTGCATGTCT GTTCTCAATT TCAAGTCCAG CGCTGATAAA GGCTCGTCCA ACAAGACCAC	1080
ACGGGGTTGG TTGATGATAG CACGGGCGAT GGCCACACGC TGACGTTGTC CTCCAGAAAG	1140
TTTGCGGATG GAACGTTTTT CATAACCTTC CAACTGAACC ATCTTGAGAA CTTCCGCTAC	1200
ACGCTGCTCG ATTTCTTTCT TATCAATTTT ACGCAAGCGA AGTGGAAGG CAACATTTTC	1260
AAACACATTC ATATGTGGGA ACAAGGCATA GGATTGGAAG ACGGTATGTA CGTCGCGCTT	1320
GTGTTGTTGA ATATCATTGA TACGAACACC GTCTAGCATG ATATCTCCTG TCGTCGCATC	1380
CAGTAAACCT GCAATAATGT TTAGGATAGT TGATTTCCCC GAACCAGATG CACCTAGAAG	1440
GGTGTAGAAT TTCCCTTCTT CCAACTCAAA GTTGATGTCT TTGAGAACCT TGGTGTGCT	1500
GTCTTCAAAA ACTTTAGAGA CGTTTTTGAA TTCGATAATT GGCTTTTCA ATTGGCATAA	1560
ATTCTTCTT TTTCATAGAT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC	1620
AGGGAGTAAA ACCACCTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA	1680

930

CTTCTCTTTC AAGCGTAATA CCTGAGTGTT CCTTGACTTT TTCGATAACC GATTGGATCA	1740
AGTCCTCGTA GTCTTTGGCC GTTCCATCTG CGACATTGAT CATAAATCCT GCATGCTTTT	1800
CTGACACTTC TACGCCACCG ATACGATAGC CTTTCAAGCC AGCTTCTGAA ATTAACGTAC	1860
CTGCAAAATG CCCGACTGGA CGCTTAAAGA CCGAGCCACA AGATGGGTAT TCCAAAGGTT	1920
GCTTGAGTTC ACGTAGGTGC GTCAAGCGGT CCATTTCCTG CTTGATAACC TGATGGGTTC	1980
CTGGAGCTAG GGCAAATTTA ACTGACAAGA CAACTGCACC AGACTCCTGA ATAGCTGAAT	2040
GACGGTAACC AAAAGCCAAG TCTTTAGCAG ACAGGGTTTC GATTCTCCA TCCTTGGTCA	2100
AGACCTTACA AGACTGCAAG ATGTGAGCAA TCTCGCCACC ATAGGCACCC GCATTCTATA	2160
AGACAGCACC GCCAACGCTT CCTGGAATAC CACAAGCAA CTCAAAGCCA GTTAAACTAT	2220
GACGGAGGGC AATGCGAGTT GTTTCAATCA AGTTAGCCCC AGCTTCTGCT TCAATGGTAT	2280
AGCCATCAAC AGAAACGTTA TTGAGCTTGT CACACAAGAT GACAAATCCA CGAATCCCAC	2340
CATCACGAAC GATGATATTG CTTGCATTGC CAAGAACCAT CCAAGGGATA TTTCTTGGT	2400
TGGCAAATTT CACAACGCGA GCCAACTCAA AACGATTTTCG TGGAAAGACC AAATAATCAG	2460
CCTCTCCACC TACTTTTGTA TAACTATAGC TATGCAAGGG TTCCTTAAAA CGGATATCAA	2520
TTCTTCTTAA GATTTCAAGC ATTTTCTCTC TTACAGACAT GTCACTCTTC CTTTACAAA	2580
ATTCAATCCA TTATACCATT TTTAGAGACA TTTGACGACC ATAAAAATAC CTGTGTTGGA	2640
TTTTCATATA GAAAAAGAGG TTCCCCCTT TTTATGATTT TTTACAAAAG ATTTCTTGG	2700
TTCCATAGGC GACCAGAACG AGCTCCAGTG CTAGAATCAC TTCAACCAAG ACTGGATTG	2760
TCAACCAGCC TACTTGGAAG AGAGATGGTG CCAGATCAAA GAAGGCATGC AAGCCATAGG	2820
CTGCTAGGAG ATAAATCCAT TTCTTCTGGC GAACAGCTTG GTAAACCCAA ACTGTCAAAA	2880
GTAATTGGAA ACCAAGCGCC AAGATTCGCT CAAAACCAAG CAAATAAATC TGCCAGACCG	2940
AAAGTGAAGT AATGGTTTTT AACATATTTT CAGACAGTAA TTGCATAACC TGTGGATTC	3000
GAGTTTGAAC TGCCGAAAGA ACAATGTAAA GATTGAGTAA ACTAGTAAGG CCTAGAAAAA	3060
TCAACTCCAA GCCACCATGC CCC	3083

(2) INFORMATION FOR SEQ ID NO: 139:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 15363 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

931

CCGGAGGATA TTGACCACCA CCAAAAGCAG GGGGAAAATC GAAATCAACC AATAGTAGGC	60
TACTGCGACA CTGGTCAACT CACTATCTGA TGCTTGATAA TAATGCAAAA AAGCTTTTAA	120
TAAAGGTTTG TCTATCAGCT CTTTCCACCA CTTTTCATG TCATACTCCT TCACCTATAA	180
TCTTATACTC AATGAAAATC AAAGAGCAAA CTAGAAAGCT AGCCGCAAGC TGCTCAAAAC	240
ACTGTTTTGA GGTGTAGAT AAGACTGACG AAGTCGATCA CATACATACG GTAAGGCGAC	300
GCTGACGTGG TTTGAAGAGA TTTTCGAAGA GTATTAACCTA ATTTCTTCTT ACCAATTCCA	360
CCATATCATA CGGTAGGGTA TTGGCAGCTT CCTTCAAGGA ATAGTTCTCT AAGTTATTTA	420
CATTTTGTCG TAATTTCTTG GCATACTTAG TCGTAATCAA TCGTTTTTCT TCGTATTCGA	480
AAATCAACTT GCGCTCCAGA TAATAGCCTC TCAGCATTTT ATCGATATTG TTGGGTTTGA	540
CACGATTGAT AACCCGTTTCG ACAAAGGCAC CACTGCTGAT AATAGCTGTT TCTCGAAGAC	600
GAGACTCCTG CATAAACTA ATCAAAGAGC GTCTGTAGAC TCCCTTCAGG TTTTCCAAAC	660
TTTCAATAAT CATCTCTGTA TTGGCAAGAT AGAGCTCTGC AATTGGTCA TAATCAAGAG	720
CACGGAGACG GCTTGTCTCC TTGTTCTTCC AGCTACGGAA GGTCTTTCG AGAGTAAAAA	780
CTTCATGAAG GAGAAAACGT AAAATCCTCA AGGAAACAAG AAAATAATAG GTCAGTCTTG	840
AGGCAAGTTT ACGATTGATT CCTTGTCTA TATTTTTCAG ATAACGTTGG TAAACTCGGT	900
AAGCACGATT GCTAATGTTT CCTTCTCAT AGGCCTGTTT CAAACCATCA CTTTCAATAC	960
TAAGAATCAA GAGTTTCAA GCAGCCCAGT CTTCTTGATC ATCCTGGTTT TCTTGGCTTA	1020
AAATGAGATT TTCAATACGT CCATGATAAT TGTCATAGC CGCATAGAGG GGAAGTTTAT	1080
TTCTGGTGTC TTCCAACCTT TTTTCCAAC CTAGCGTTAC TTCATTCAA ATGGCGATAT	1140
GCATAAGATA ATCCTTGCTT TCTTCTCTT CATCAGAAAG ATGAGGCAAG ACCAAGAGAC	1200
CTGTTAAAAA GCTAACAAGC GTCACACCTG CAACAAGGAA AAGCAAAAGA GGATACTCCT	1260
GTTCTAGATT ACTTGGTATC AAGAGAATCG TAGCAATCGA CACCGTTCCC TTAACACCTG	1320
AAAAGGTCAA GAGAAACATG TCCTTCATAT ACTTATTTAG CTTTTCCTTG AGGCGTCGGG	1380
TTCTATAGGC ATAATAGCCA TAGATCATAA TAAAACGAAT GACAAAAAGG ACAAAGGTAA	1440
GGGCGATAAG AGATAGCAAT AAAAGTAGAG GATTATAGAT TGGATTGGTC AAGATAGGTT	1500
CTGCTATCAT TTCCAACCTC ATCCCTAAAA TCACAAAGAC AGAACCGTTG AGCATAAAGG	1560
TCACTGTATG CCAGACCGTC TCGGTCACCG TATCCACTTG GGCTTCGAGG AGCGTGATTT	1620
TCTTGAAGCG ACTTGCCTTT AAAATTCCAG CAACTACGAC GGCAATAATA CCTGAAACAT	1680
GAACCTCTTC TGCCAGAAAG AAGGTCACCTA GAGGCAAACT CAATTCTAAT AAAAGTTCAC	1740

932						
TGGCAATATC	CGTTGCGCGC	ACACTTAGCA	AGAAGGTATG	GAGGAAGCGG	TTGGTCATGG	1800
CTGTTAAAA	TCCAATTAAA	AAACCGCCTA	GGATTGAAAA	GATGAGCGAA	CTGCTAGCTT	1860
GCCCCAGAGA	AAAAGCTCCA	GTGTGTCGAAG	CTGTCAAAGC	TACCTGAAAA	GCCACCAAAC	1920
CAGAAGCATC	ATTCAAGAGT	CCTTCGCCTT	TAAGAATATT	GGACACGCGC	TTAGGAAAGC	1980
TAAAACGCTC	CGAAAGAGAG	GCAAAGGCCA	CCAAGTCCGT	AGGACCAAGG	GCTGCCCCAA	2040
CAGCCAAGCA	AGCTGCCAAG	GGAAGGCTGA	ACCAAAGAAG	ATGGGCCAAG	CCACCCAAAC	2100
TCAGGGTCGA	GATAAAAATC	ACTGGAAATA	TGAGATAAAC	AATGATTTCG	CAGTGTTTTA	2160
AAATAGCCGT	AACATCTGCT	TCTTCAGCCT	CTCGGAAAAG	CAAGGGTCCG	ATAACCAAGT	2220
CCAAAAACAA	CTCCGTATTA	AGGTGAAAGT	CAGTATTGGG	TAAAAAGAGA	CCAATCACAA	2280
TTCCCAAAAG	AATTTCGACC	AAAGGGAGAG	GCAAAAAGGG	CAGGAGCTTA	TTGGTTGTAC	2340
TTGAGACAAT	CAAAACCAGT	AAAAATAGGA	TGAGGTAAAT	CAGTAATTCC	ACGCACGTCC	2400
TCCTTAATCT	TTTTTACAAC	AGGATTCAAA	TATCTCCTTC	TGCTCTTTGA	TTTTTTGGTC	2460
AATCTTGGA	CAGTCTTTGT	GCTCAATTTT	TCTCTGGCAC	CGTTCCATTT	CAAGAGCAAC	2520
TAATTTTTTC	TTGATTTTAA	GCATTTTTTT	GCTCATATGC	GCTTGGTCTA	GCACGCCCAT	2580
CGCTCGTTCT	TGGTGGGTG	ATTCAACAAA	ATTCTGGCGC	ATGGCATCCA	GCTTTTCGTG	2640
TAAGTATTGT	TTATCCATGT	CTGTATCTCT	CTAATTTTTC	AATCATCACT	AAAAACGGCG	2700
GGTTGTTGAC	TTGGTTTAAA	GTTCCGTAAA	TGGCAGCTGT	GTAATCTTGT	TGGTTCAACT	2760
GGATCACAAA	ATCCAAGACA	GCATCTCTCT	CGAGATCGCC	TCCTTTCATGA	CCATAGTAAA	2820
TCATAATAGC	AATTCGTCCA	CCTTTGACAA	GTAAGCCACA	TAGCTTTTCT	AATGCCTCAA	2880
TCGTTGTCTG	CGGTCGGGTG	ATGACAGACT	TATCAGCTGC	CGGCAAATAG	CCCAGATTAA	2940
AAATCCCTGC	CTTAGCTTTT	ATCACAAACT	GGTCCAGTGT	CTCATGGCCT	TGCAAGATTA	3000
ACTGGGCATT	TGTCAAGTCA	GCCTGATGCA	AACGCTCTTG	GGTCTTTTCC	AAGGCTTGCT	3060
TCTGAATATC	AAAGGCATAG	ACTTGCTTGG	CTAGCTTGGC	TAAAAAAGC	GTGTCATGAC	3120
CATTTCCCAT	AGTCGCATCC	ACTACGACAT	CCTCTTTTGT	CACGACCTCA	GCCAAAAAAT	3180
CATGTGCCAT	CTCAAGTGGT	CTTTTCATTT	TCAAACCTCT	GTTTACAGC	CTTGCATCCT	3240
TGAACACTTC	CACGACGTCG	CATCTCCATC	TCAATGCTGT	TGAGGACTTC	CCATTTATTG	3300
AGGCTCCACA	TAGGACCAAG	CAGCATATCC	CTAGGCGCAT	CTCCTGTAAT	TCGATGGATG	3360
ACGATATGTT	TGGGAATAAT	TTCCAGTTGG	TCACAGATGA	CCCTGACATA	TTCGTCTGTA	3420
CTCATCAATT	GTAAACGCCC	CTCATGGTAA	TCTCGTTGCA	TACGAGTATT	TGTCATAAGA	3480
TGGAGCAAAT	GCAGTTTAAAT	CCCTTGAATA	TCGTTATCCG	TGACACAACG	GCGGACATTT	3540

933

TCAACCATCA TCTCATGGGT TTCACCAGGC AAACCATTTGA TCAAATGGGA AACAACTCTCA	3600
ATTTTGGGAT ACTTTCTCAA ACGCTTGACC GTTTCACCT ACAATTCATA AGAATGCGCA	3660
CGGTAAATCA GGTCAAGAGT TGCTTCATAA GTAGTTTGCA AGCCCAATTC AACCGTCACA	3720
TGCATGCACT CCGATAAATC AGCCAAATAT TCGATGGTTT CGTCTGGTAA ACAGTCTGGG	3780
CGCGTTCCAA TATTGATTCC TACCACACCT GGCTCATTTGA TAGCCTGTTC ATAACGCTCT	3840
CGAATAACTT CCACCTTTTC ATGGGTGTTG GTAAAATTTT GAAAATAAAC CAGATACTTC	3900
CGAACATCCG GCCACTTGCG GTGCATAAAG TCAATTTTCCT TATAAAATTG CTCACGGATA	3960
GGCGCATCCG GTGCCACAAT GGCATCTCCA GAACCAGAAA CCGTACAAAA AGTACAGCCC	4020
CCATGAGCCA CAGTCCCATC ACGATTGGGA CAATCAAATC CCGCATCAAT AGGGACTTTA	4080
AAAGTCTTTT CTCCAAAGAG TTTTCGATAA TAATCATTTCA AGGTATTATA AGATTTCATG	4140
ACTTTCATTA TAACAAAAAT CACCCACAAT CTCAAAAGCC TGACTTTCCT ATAAATTCCT	4200
CTGTTTCTCG TTTCCATTAG CCTTTTMTTA TGATACAATA TGGGTATGAT TTTAATGAAA	4260
TTAGCATCTA TTTTATTATT GATACTGACC TTAGTCGTCT GCATTATCCT AACCAAATTC	4320
TTTAGATTAA AAAAATAAGG ACGAACTTTT GCGGATTGG CTTTTCAGT CTTGGTATTT	4380
GAGTATTACT TGATTACAGC TAAAACCTTT ACCCATAATT TCCTCCCTAG ACTGGGGCTA	4440
GCCCTCTCGA TCCTAGCCAT TATTCTCGTC TTTTCTTCC TTTTGAAAAA ACGCAGCTTT	4500
TACTACCCTA AATTTATCAA ATTCTTCTGG CGTGCAGGAT TCTTATTAAC CCTTATCATG	4560
TATATAGAAA TGATTGTTGA ATTGTTCTTA ATGAAATAGT CGAATCCCTA AGCATTTCCT	4620
AGGGATTTTT GCTTCTCTA CAAAATAGTA TAGACAATAA CACTATACAA TTTTATACAA	4680
AGAAAAGAGT CTGGGACAAT AGTCTCTTAT ATCCAAAAAG GCAACGGATT TGCCGTTGCT	4740
TTTTTGGATG GTTACGATAG TCTTGGTAAA ATAGAATTGC CCAATAAACC ATTTAGAAAG	4800
GCTATCCCAT GCATATTCAC TATAACACAA ATCAAACAAC TTTACCACTA GAAATCAGTT	4860
CCTTCTTACC ACAAGATCAT CTCGTTTTTA CTATTGAAAA AGTGGTGAAT ACCTTGGAGG	4920
AACGTCACTT CTACACCTCC TATCATGCCT TTGATCGCCC GTCTTATCAC CCTAAAATGC	4980
TTGTATCTAC TCTTCTATTT GCCTATTCAC AAGGGATTTT CTCTGGTCGA AAAATTGAAA	5040
AATGGAAGAG TTAGTGACCT TAGATTGTTT GTTTATTGAC AGAACTAAGA TTGAAGCCAA	5100
TGCCAACAAG TATAGTTTTG TGTGGAAGAA AACGACAGAG AAATTCCTCCG CCAAATTCAT	5160
AGAACAGATA CAGGTCTATT TTCAAGAAGA AATCACTCCC CTTCTGATTA AATATGCCAT	5220
TTTGTGATAAG AAACAAAAGA GAGGGTATAA AGAGTCAGCT AAAAATCTAG CGAATTGGCA	5280

934

CTATAATGAC	AAGGAGGATA	GCTACACACA	TCCTGATGGC	TGGTATTATC	GTTTTACCA	5340
TACCAAATAT	CAGAAAACAC	AGACAGACTT	TCAACAAGAA	ATCAAGGTTT	ACTACGCCGA	5400
CGAACCTGAA	TCAGCCCCTC	AAAAGGGACT	GTATATGAAC	GAACGCTATC	AAAAC TTGAA	5460
AGCTAAAGAA	TGTCAGGCGC	TTTTATCTCC	CCAAGGTAGA	CAGATTTTCG	CTCAACGCAA	5520
GATTGATGTG	GAACCTGTCT	TTGGGCAGAT	AAAGGCTTCT	TTGGGTTACA	AGAGATGTAA	5580
TCTGAGAGGG	AAGCGTCAAG	TGAGAATTGA	CATGGGATTG	GTACTTATGG	CCAATAACCT	5640
CCTAAAATAT	AGTAAAATGA	AATAAGAACA	GGACAAATCG	ATAAGGACAA	TCAAATCGAT	5700
TTCTAACAAT	GTTTTAGAAG	TAAAAGTGTA	CTATTCTAGT	TTCAATCTAC	TATACAATAA	5760
GAGAATGACT	CAAAATTAAA	AAGCTAGAGT	TCCACAATTG	GAAATATCTA	GCTTTTTTGT	5820
GGTTGAGAAC	TATTTTGTCT	CAGGCTCTTT	ATCTTCTATT	TAGGACAAGA	GTTTTTCTTT	5880
GGTCTTTAAT	GATAAAGAAG	GTATCAAAAT	TTCTAGTCTT	CTTTTTTACC	TTTAGTAACT	5940
ACTAATCCTG	CACTCAAACC	TAGAAGAGTT	AAACCTGCTG	CTACTGCTGC	TTGGCTTGCC	6000
GCACTACCTG	TACTTGGTAA	CTGGGCTTTA	TTAGTTTGAC	TAGCTTCACT	TGAATCAATT	6060
GGTTTTGTAT	CTGCTTTTTC	TGACACTTGT	GGTTTTTTAG	CTTCTTGAGC	TACTGGTTTG	6120
GTTCCAACCA	AGACGATGCG	GTCTGTGCGA	ACTTCTACCA	CTTCACGGAG	TTTTTCTTCC	6180
TTACTTCCAT	CAGGATTAAT	CGCTGTAAAG	ATACGTTCTT	TTCCAAC TTT	TCCTTCTTGT	6240
TCTACACGAG	TTTCACCTAG	ATACAGTGTT	GAATCTTTT	TCTCAACTGT	CTTGATATGCC	6300
AAATCTTTTT	CAACAAATTC	GATTTTTGGA	AGATCTTCTT	GTACAGCAGC	AACTGTCTTC	6360
TCAGAACTG	GTTTTTCCTT	AGTCAAGTGG	ATACGGTATT	CCTTGACTTG	TTTTCCACTT	6420
TCTGAAACGA	GGCGAACAAG	TACTGAAAAG	CTATCTTCTC	CACTATCTAC	CACAGTTGAA	6480
GCTACTTGAT	TGTTTTCTTC	AACTGAGACT	TTGGCCGTT	GACCTTTATA	GGTAATTGGA	6540
TAGTCTTGAC	GATTTTCAGC	GAAATCAGCA	AGTCTTTTTC	CATCTACAAG	AATCTTTGAT	6600
TGAGTGCTTT	CTTGAGGCAA	TTCACTTGGT	GCAAGGAAGG	TCATCTCAAT	CATCGCAACA	6660
CCGCTCTTAT	CTGCTTTACG	CTCCATACGC	CATCTCATAG	CTTTGGCTTT	GATAGCTTTA	6720
AATGTTACGT	TGATTTATC	ACCAGCTGCA	ATGTCTTTAT	CCGCACGATA	AGGAACAGCT	6780
TCCCAATTTT	CTGGATTGTT	GAATGGATGG	TCTGCGTCGT	AGGCTTGGTA	GTTTGAATAG	6840
TAGGTTGGCA	CTTCAAATC	TGGACCGACA	TAGCGTTCTA	AAACGAGTTT	AGATGGTGCA	6900
TCCGTACCAC	TATCTGCAAA	GAACTGAACT	TTTCTTGTG	TAACAGTCCG	TTCTACAATC	6960
TTACCATTTT	CACGGAAAAT	CACACCCGCT	GATACTTCTG	GATTAGAAGA	TGGTGTGGT	7020
GACCAGTTTG	TCCAACGACG	ATTTTCTGAA	TGATCTCCGT	CATTGAGATA	GTCAACGCGG	7080

935

TCATGAGAGT TTTTGTCAAT ATCATTTGGTT GCTGAAGCAA AGGCCTGGTT ACTGTTTTCA	7140
TCATAGTTAG GGTATCTGA AAGAGTCTCA CCAAGTTTGT CTGTCACTCG TACAGTGATC	7200
TCAGCAACAA GGTTACTACC AAGGACACGG CCTCGAACAG TAAATTGACC TGCTTTTGTC	7260
AGATTTTCCG CTGGAAC TTCCTATTCA ACTGTCAGGT CTTTGTGTTT GTAGCCGTCT	7320
TTACCTGTGA AGTAACTGG AACCTTAGTC GGCAATTCAA GTGCTTGACC TACTTGTAGC	7380
AAGCGAGCTT GTTTAACCGC AGCAACTGGT TTATGAGAAA GTAAGCTCTT ATCCTTAGTG	7440
AAGTCAGAC GGTATTCTCC TAAGATGTCG CCATTTTCAG CTTTCGCGAT GACACGAACT	7500
GGCTCACCTT CACGAACGCT TGGAACGACG GTAGCGAGAC CATTTGTGCT AACACTTGCT	7560
GTGACTGCCG GAACTTTTCC ATCTACAGAC TCAAGGTAGT AGTCTGTCAA ATCAGGGTTG	7620
AAGTTTGCTA AGTCTTTGCC GTCAACTTGG ATTCTTGTTT GTCCTTGCTT GGCTGCCGCA	7680
ACTTGTTCG CAAAGATTG TACCTCTGTG ATAGACGTTT CACGCTTGTT ATCTGCTTTA	7740
ACCATGCGAA TACGAACAGC ATAGGTTTCA ACTTTATCAA AGCTAAAGTG GTTCATTCTT	7800
CCAGCCTTGA GTTGAGCAGG GGCTTTTAGA TTAGTAACTG GTTCCAGTT GGCAGAATCA	7860
TTAAAGACAT GGTCTCATT ACCAACAAAA CTAGGGTTTT TAGGAGCTGT TGGGACAGTC	7920
TTACCAACAT AATACTCAAT CACATAAGAC TTCGGTACAC CAACTCCATG GTCTTCATGG	7980
AATCCGACAC TTAGATTATC AACGGAGCGT TTGCTCAAGA TACCTGAATC TCCAAACAGA	8040
ACACCGACTG AAGCTTCTGG ATTAGTACGA TTCCAGTTTG TCCAACGATT GGCTGGTTGG	8100
TTATTGTAGG AAATGAGCTT GTCATTAAAC TTTGAAACTG GGTGCTTGG ATTTGAGTCT	8160
GAAGCAAAGG CAAGTGGCAA TTCTGAACCG GTCCATTGGT CAGAAATGTT TGCACCTTGC	8220
TCAGTTTGAG CAGATACGCG AACATGAAGT TTAGTTGTTA ATTGCGTACC TTCTAAGCGA	8280
CCATTAACTG TAAAGACACC TTCCTTAGCG TATTGCTCTG GACGAATCGC ATCCCATGCA	8340
ACCTTAGCTG ATGAAACGTG ACCATTTGAA TCATATGTCC GAACACTTTC TGGTAATTGT	8400
GGTGCTTCTG CGATTGGAGT TGTCACTAGT ACTTCTTCAA CTGAAACGAT ACCTTCTACA	8460
GAGACTTTTG CACGCGCTTC AAGGTCAATT CCTTCAACTT TACCTAGTAC TTCAAATGTT	8520
TGATAGGAGT CTAGTTTTTC TTTCGGAATA GCTTGCCAAG TGACTTTATG AGTTTTAGGG	8580
AAACCTTTGT CATACTCAAC TGTTACTGTT GCTGGAAGAC TTGGTTCCTG ATGCAAATCT	8640
GTCACACAT TTACAGGACG GATGGATTGC GCAATCTTCT TCTCAGTATT GGCTTGGATA	8700
GTGAGTTCAA CTTGGTCTTT AGCTCCCTCA TATTCAGCGT TCAGAGTGAC TGCTCCTGGC	8760
TTATGCAACT CAAGCATTC TTTACGAATT GCGACTTCCC CTTCACTACT TGTAGAGAAG	8820

936

GTTACTTTAT CAGCTGGTAA TACAGCTTGC GTTCCATCTT GATAGTGAGC TCGAACCGAC	8880
AATTTGACAG TTTGGTCTTC TTTGAGACTG TCAGCTTTTT CCACTTGCAA GCTCAAGTGA	8940
GCAATTTTTG GCGCTTCTTC AAGGAATTGA ATTGCATAGG TTTGAAGAGG GCCACCATCT	9000
TTAGGCTGAA TAAAGATGCT CGCACGCATG CCGTTTGCTG CGCTTGCTTG AAGAACTGTA	9060
ACAGCTGCAT TTTTAGCACT TGCTGTGACT TCTGGCAACT TAGCTCCATA AGCAAGAGTG	9120
CGGTATTGCA TTGGTTTTTG ACTAGTAAGA CCTGTTACTG CCTCACCACC AACCGTTACA	9180
GTTGGTACTG CAGGTGCCGC AGGATTGCCT TCTTCTACCA CAAGGGTTGC ATGAATTGGT	9240
TGACCTTCTA AATAACCGGT CGCTTGAATA CGAGAACCCTG GAATTGCTAA CTTAGCTTTA	9300
TCTTCTTCGG CAATCTCCCA CTTGTCCACT TCATACTCTT CAACACTTCC ATCAATCAAA	9360
ACATAGGAAA CAGATTTGTC TACAGAATTC AAGTCAGTAT TTGGAGCAAT ACGTTTCACA	9420
ACTGGTAGCT CTGATTAAAG AGCAATCACT TCTACACGAG CTTCTACTTC TCGTCCGTCA	9480
GCCATACCTT TCACCGTTAC AATACCAGGC TTGCTCACAT CTACTGAAGA CCAGGTTACA	9540
GGACGTTCTG CACGGCTACC ATCACTGTAT ACAAACGGAA CAGTGGTAGG CATTTCAGGT	9600
GCCTCTCCAA TAATGGTCTG TACTTTTGGC ACTTCTGTCC CCAAACAGT CTTCTCTGT	9660
CCTTCTTTCT TACCAGTAAA GACAGTGACT TGGTTCGATT TCAAGAGATC AGAGTGGGCA	9720
GTCAGGGTGA ATTTCCCTGC TTGTTCAAGT GATTTGACAA TGGCAACACC TTTACCATTA	9780
AATGCTTTAC GAATCCAAGA ACCATCTGCT TCGCCTTAT AGCGTTCACG GCTGGCTTGT	9840
TCTCCGTAT CTACACCGAC CAGTTGACCT TGGCCATGCA ATTGGAAGCG AACCAGATTA	9900
TTAGCAGTTG GAACCACATT CCCCTGGCTG TCAACAATTT CATAGTAGAT GTAAGTCAAG	9960
TCTTTTCCAT CTGCTGCAAT CGCATGGTCT TCCTTAATAA GACGAACTGC CGCTGGCTTA	10020
CCAGCAGTCG TAATCTTATC TCGAGCAATT TCCTTGCCAG ATTCATCACG AGCAATTGCT	10080
TCCAAGGTAC CTGGTTGATA GGCAACTTTC CATTCAAGAT AAAGTTCATT AGCATTTGCA	10140
CCTTCTTGGT AAGTCCGCCC ATCGCTGGTT TGTTTTTTAT TGAAAGTCTT AAGACCAAGA	10200
GATTTTCCAT TCAAGAACAA TTCTACACTA GAAGCATTCG AATAAGCACG AACTGGAATC	10260
TTACCTTCTG AGTCAGCTAC TTTGGATGCT AATTCTTTGT TTTCCAGTT CCAGTGAGGA	10320
AGAAGGTGTA CCATCGGTTT CTTCTTAACA GAAACCCATT GGCTTTGGTA GAGATAGAAG	10380
TCATGTTTTG GAATGCCGGC TGTATCTACG ATACCAAAGT AAGAGCTCTT AACAGGAGTT	10440
TGATTTTGGT TGTGCCATGG TGTAGGTTCA CCAATATAGT CCGTACCTGT CCAGATAAAC	10500
TGTCCAGCAT AGCCAGCGTT GTCACGGTCA AAAGTCCATG AAGCGGTTGC TGTTTTCCCC	10560
CAACCCACAC GATCATTTCC ATAATCTGAC TGTTCATAAT TACGCTCAGG TCCATTGCTA	10620

TGTTTCAATT CACGTT CAGG GCGATAGTAA CTTCCACGTG TACGGGTAGC TGAAGATGTT	10680
TCTGATCCAT AAATCAACCA TTTTGGATGC TTAGCTCTAA GGGCTTTGTA ATTATCTTCA	10740
GAATAGTTAA ATCCAACAGC ATCGAGTTCA TCAGCAATTT TCTCATGCCC TCCGCTACCA	10800
TTACCGAAAC GGAATTTATC TGCTCCCATG GTAACATAGC GAGTCTTATC AACATCCTTG	10860
ATAACCTTAA CCAAACGTTT AACAGTTGCT AAAGAGTGGG CATCACCATT AGCTTCACCT	10920
ATTTCATTAC CAATTGACCA CATGAAGATA GCAGGGTTGT TTTTGCCTCT TTCGACCATG	10980
GTACGTAGGT CAAAATCAGA CCATTTTTCCT CTTTTCGAG CTTCTGGGTG AGTGGCATCT	11040
TTTTCAAAGA AACGTCCATA GTCATAAGGT TTCTTGCCAC CATACCACGT ATCAAAGGCC	11100
TCTTCCTGAA CGAGTAAACC TAGTTCTGCT GCGATTTGCA AGGTTTGCTC ACTAGCAGGG	11160
TTGTGGGTTG TACGGATGGA GTTAACTCCC ATCTCCTTCA TTTGTTTGAG ACGGCGATAT	11220
TCTGCTTTAT AGTTTCTTTC TGCTCCAAGC GCCCATGGT CGTGGTGCAA GGATACTCCA	11280
TGGAATTTAA TACGTT CACC ATTCAAAGAG AAACCTTCAT TTGGAGTCCA GTGATAGTAA	11340
CGGTAACCAA ACAATCCTT CTTAGCATCA ACCAATTGAC CGTCACGGTA AACACGCGTA	11400
ATCAATTCGT ACAAGGCAGG TTTGTCAATT AAAACAGTCC AGAGTTTGG TCTTTCAACT	11460
TCTAAATCG CATCTAGGCT TGTGATTCA TGTGCTTTTA AGGTACGACT CGCTGTACGA	11520
ACTAAGCCTG TTACAGCATG ACCACCTCGT TCAACGATTT GATATTCGGC TACAAGTTCA	11580
TGGTCTTTGT CGTCCGTATT GACGATTTTG CTGGTCACAT GAGTTTCAAC CTTGCCATGT	11640
TGTTGTCTT CAAGTTTGG TGTTAAATA GTTGTCCCAT TTTTCTCAAC ATGCACCTTA	11700
TCTGTCACTT GTAAAGTCAC ATCAGATAG ATACCACTTC CTGAATACCA ACGGCTACTT	11760
GGCTGTTTGT TGAATGCATG GACAGCAATC ACATTTCTCAC GACCATCTTT TTGAAGGTAT	11820
TTGGTGATAT CATATGAGAA CTGGTTATAA CCATTTGGAT AATGCCCCAC TAACTGACCA	11880
TTGACATAAA CTTGAGAATC CATGTAGACG CCATCAAAAG TAAGGCGAAC ATTTTCTTG	11940
AGGTCTTTTT CATCTAGTTT GAAAGTCTTG CGATACCAAG CTTCCCCACC GTTGAGCTGT	12000
CCACCTTCAT TTTGTGCAGG AGATTCATGA TCGAAATCGT TAAAGATACT CCAGTCATAC	12060
GGTAAATCTA ATTTTTCCTA CGTAGATACG TCTGCATCAG GTTTAATGGC TTCCTTAGAA	12120
TTTGCATTGA GTTTAAAGTA CCAATTTTGA TTAAATCCA CTTTCTCTGC TTCAATCATT	12180
TGATTCACCT CTTTATTTGT TACAGCTTTA GCATCTTCCT TGAGCGGTTT TTCTTGATTT	12240
GAAGCTTGTG ATTCTATCCT TGGAGCTTTT TCTTCCGTT TAGCAGACAC TTTTCTCTCT	12300
TTTGGAGTTA CGGCTTCATC TTCTTCTTTC TCAGATGCAA TAGCCTCAGT TGAAC TAGGT	12360

938

TCACCTTTGTT CTGTCCTTTC AACTATATTT TTAGTTTCCA AAGCTTTATC AGCCTTTTCT	12420
TCTACTATCA TTTTTCCTC TTTAGGTTTC TCAGCAGTAT GAGTAATAAG TGTTCATCC	12480
GCATAAACTA CAGATTCTCC AGCTATATTT CCTCCTAATA AAAGTGCACA AGTCCCAATC	12540
ATTACTGAGC AAGCTCCAC AGCAAACCTA CGAATGCTAT AAAGTCTTTT CCGATTCCAA	12600
TGGCCTTTCC CCATAAAACC CTCCTTATAT TATATTTAGT GCAGTTAGCT ACTACCAAAG	12660
CCCAAGTGGT ATACATGGTA TGACAACCTA GTTCAACAA TTTACACTCT GCGAAAATCC	12720
AATTCAAACT TCGTCAGTGT CGCCTTGCCG TAGATATGAT TACTGACTTC GTCAGTTTCA	12780
TCTACAACCT CAAAACCATG TTTGAGCTG ACTTCGTCAG TTTTATCTAC AACCTCAAAA	12840
CCATGTTTTG AGCTGACTTC GTCAGTTTCA TCTACAACCT CAAAACCATG TTTGAGCTG	12900
ACTTCGTCAG TCTTATCTAC AACCTCAAAA CTGTGTTTTG AGCAACCTGC GGCTAGCTTC	12960
CTAGTTTGCT CTTTGATTTT CATTGAGTTT ATATTTTATA GGAGCGCATT ATTTTGCTTT	13020
TGCTGCGTAC TCTTCGTTAC GTTTGATCAT TTGTTTTCTG TACCAAGCAA AGATACCGAT	13080
ATAGAATACA AGGAAGACTA CTGCACCAAG GATTGCTTTG ATATCACCAG TTGTAGTGT	13140
ACCAATTGTC CAACCAAGAA GTTTTTCGAT TGGTCCTTCA AGAGTAGAGT GAGTAATCAA	13200
TTGAGTTTGG CTCACACCTT CTGGGAAGGC ACCTACACCT TTAGCAAGTT CTGTTGCAAA	13260
TGGTGCAATA AGTGACCTG AAAGAAGGAA GAGTGGCAAC AAGAGTGTTT CGAAGATAAT	13320
CATACGGAGC AATTTACCAC GAGTTACAAC CAAGAGAGCT GGAGTAACAC CCATAGCGAT	13380
GATACCTGCA AGTGGCAAGA TACCATTTCC AACTTTTGAA AGAAGCACTG CTTCAATCAA	13440
CATGATTGGT GCAAGTACGT TGGCACAAGC CCAGATTTCA GCACGACCAG CGATGAATGG	13500
CCAGTCAAGA CCGATATTGA ATTTACGTCC TTGAAGACGT TTAGTAGCAA CGTTTGTAAT	13560
ACCTTGATGAT AGTGGTTCTA CGGCTGCGAT GAACCATGAA CCGATAAGTG AGAAGAGTTC	13620
CAAAGATACA CCGGCAGTCA AACCAAGAGA CAACCATCCT TTGATAACAA GACGCCATTT	13680
ATCTGCATCT GCAACACCTG CAATTGGATG TGGAGTTCCC ATAATACCGA TAACGATACC	13740
AAGGATGAAA CCGATGAAGA ATTTAGATCC CCAGAAACCG ATTTTCTTGT TCAATTTAGC	13800
AGCATCAAAG TCATATTTAT CAAGGCCTGG GAAGAATTTT TCAAAAATCT TATCCAAAAC	13860
CATGATAACT GGGTTCATCA TGTAAGTTCAT GTGAGTTGAT GTCATTGGTG ATGAACCTGG	13920
GGCGTTAAGA AGGTCATCAA ATGTAGGTTT CATCAAGTCA GAGTTGATAA TTTTCAACAC	13980
ACCGACAAGG ACGATAGCTG CTGTAGCAAT AAAGAGTGAA ACCCCTTGAC TCACACCATT	14040
GTTATCAGCA TACCATTTAA TCAAGAGACC TGTGATAGAC AAGTGCCAGA TATCAAAGAT	14100
ATCGACATCA AGTGATCTG TTTTCTTCAT AGCTAGCATC ACTATGTTGA CAATCAACAT	14160

939

GATGAGCAAG AAGTATAGTG TCCAAGCAGA ACCCCAAGTG ATTGTAGCAA GTGGTGCCCA	14220
ACCAACGTCG GTAATACTCA ATTGGATACC AGTGTMTTCA ACGAATTTTG CTAGTGATGC	14280
TGAGAAAGCA GTGTTTAGCA TACCGATGAT AGCACCGATA CCTGTAAGAG CGATGGCAAG	14340
TTTGATACCA CCTTCAAGCG CTTTGGAGAA TTTCACTCCA AAAAGTAAAG CCAATACTGT	14400
CAAAATGATT AACATGATGA CAGGTCCACC CATTTCTAAG ATGGGATTGA AAACCTTTCC	14460
GATTAGGTCA AAGATTGCAT CCATAACAGT TCCTCCCTTT TTGATGTTAT ATGAATGTTA	14520
ACAAATTAGA ATTAGCTTAA TCCGTGTTCT TTAATAGCTG CTTCAATATT GTCAAATACT	14580
GGAGCGCTCA TTGCTGGGAT ACGGAATAAG ATTGGCCCAG CTTGATAAC TGGGATACCT	14640
GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG	14700
TCTTCGTTTA CATCTTTCAC CATGACTGCA TCACAGTGAA CATCATAACC ACGGTTTGAA	14760
AGTTCTTCTT CTAGAGCACT TTTAATTTGG TGACTTGAGT TAACACCTGC ACCGCAGGCA	14820
GCAAGAATTT TAATCATTTA GATTTCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC	14880
GGTTGCTTCA GCAATGTAAG TATAAAGGCG TTCTGGTTCA GAAATTTTGG ATAGGTCTTC	14940
AAGATGACCA TTTCTGTGA AGAAGTCCAT TAACTGAGCA AGAATGTTTCG TTTGACTTGA	15000
ACTGAATTA TTAATGATAA AGAAGAGTAG GGATACTTCT ACTTCCTTAT CAGGAGCTAT	15060
CATATTGTGA AAAGTTATTG GTTTTCTAA TCGAACAACC ACCACTTTCT CAGCTAGATT	15120
ATGAACAATA TCTGTGTGAG GAATCGCTAC ATTTGGCAAG TCCTTTCCTA GAAATTCAT	15180
ATCTAAACCA GTTGAAATG ACTTTTCACG CGTGATCAAG GCTTCACGAT AAGTTGGAGT	15240
GACAATTTCT CGTTCTTCCA ATAAAGTTGC AACCTGATCA AAGAGTTGTT CTTGACTATC	15300
CGCTTCTAAG CAAACACAA GGTTTTGTG AAAGAAATAA TCTAATACCA TAAGTTTTC	15360
CGG	15363

(2) INFORMATION FOR SEQ ID NO: 140:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 28882 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

TAAGACTATT TAATAGTGGA GTGAAATAGG ATACGAACAA ATTGATTAGG AAAATCAAAT	60
GAATTTATAG AAATCTTTTA GCAGTTATGT TATCCTATTC TAGTTTCAAA ACGCTATAGA	120

940

AGCAGCATTG TGCTAGTCKA GATTCAGTTT ACTATACTAA AACGAGTAGC TTGAAATCAA	180
AAAACCCACC CTCACAGGCA GGTTTTATCT GTATTATTCA GCTAGATTAT GCTTTACCTT	240
CTGAACCGAA TACGTCGATA CGTTCCTCAA CCGATGCTTG GATAGCTTTT ACACCGTCAG	300
CCAAGAATTT ACGTGGGTCG AAGAGTTTTT TCTTGTCGTA TTCTGCTTCG TTTGCTTCGT	360
AGTCACGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTCT GTGTTAACGT	420
TAACTTTGGC AACACCAAGT TTGATAGCTG CTTGGATTTG CTCATCAGGA ATACCTGATC	480
CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTCG AAGTGGTCAA	540
GGTCAAGACC TTCCAGTTT ACTGGGTAAG GACCGTGGAT GTTACCGATA CCAGCTGCCA	600
AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTCACCTT	660
TACCGATGAT TCCATCTTCT TCACCACCGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC	720
CTTTAGCGTG TGCTTTTTC ACAACTTCTT TAGCCAATTT AAGGTTTTCT TCAACTGGAA	780
GGTGTGAACC GTCAAACATG ATTGAAGTAT AACCAACTTC GATACACTCA AGTGCACTCT	840
CGTAGTGACC GTGGTCAAGG TGGATAGCTA CTGGTACAGT GATACCCATT GATTCAACAA	900
GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG	960
AAGTTTGAT CAAAACGTGA GCTTTTTCG CTCTGCTGC GCGCAAGATA GCTTGAGTCC	1020
ACTCAAGGTT GTTGTGTTA AATCCACCAA CTGCATAACC GTTGTCACGG GCTGCTTGA	1080
CAAATTTTTC TGCTGAAACG ATTGCCATTT TATCAGGCCT CCTGTATATT TTTATGGGTC	1140
ATCCCATTTA CATTGTTCAT TTTATCACTT TTTGCCAAAA AAATCTAGTT TTTCCCGCAG	1200
TTTCGATTGA TTTCTTCTA ACTCCATCTA TGTAACCCCT TTCTCTCCCT AGTCTTGGAC	1260
GACTTTTGA AAATCTATAA AGAAGGTTAA ACTATTCTCC TCCATCTCGA AACGATAAGC	1320
TAATTTTTC TGTCTAATA GACTCTTAAC CACAAAGAGC CCCATACCAG ACCCCTTGAC	1380
CTTGCGACTG GCATTGTCAG AAAAAGACTG GGCTAGTTTT TCTTGTTCCT CTGAGCTACA	1440
GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCAATT CGAACTAAGC CACCTGGAAC	1500
AGAGTGCTTA ATGGCATTGC TGATGAGATT AGAAAGAATC AACTTCATAA CTGATGGGTT	1560
TAGATAAGCC TGCTGATGGG TCAAACATTT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG	1620
CAAGGCATAA TCTTTGACCA GATTTTGCGT CATCTGGAGG AGGTCAATTG TTTCCCTATC	1680
ATCTCGCAAT TCCTGCACAG AAGAGAGGGA AAGTATCTGC AGAACATGGT GATTGAGTTC	1740
ATCCACAATC CCCAAGGCAA CTCCAGATA CTGGTCTCTA TCCTTATAAC GACCGATATT	1800
CTCTCTCATA TTTTCGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCATGAGA	1860
AGCTCCTCGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGCTT CATTCCTTTC	1920

941

ATGCAAGTCC GCAATAACAG TCAAGAGATG CTGGTAGAGG CTATTGATTT GTTCCTTGAG	1980
ATTACCTATC TCATCCTTAG AATCCACGCG CAATCGCACT TGGGAATCCA GTTCCATCAT	2040
CCGACGGGTC ACCCGCTTGA TTTCCAAAAT CGGTGCAACA ATAGTCCGAG CGTAGATGTA	2100
GGCCACCAAA AGGGAAATCA GAAAGGAGGC CAGCAAGGTA TAGGGAAGAA ACTGGAGACT	2160
GATTTGCTCC GCTTCCTTTT GTAAATCCAT GGAAGCTAGA AACTGGAGAA TCATAGTACC	2220
ACCGTCTTGC GTTTTCACCT CGCGCTCCTC AATAAGAGA GAGGTGTCTT GCGGCTCTGT	2280
GTCCAGAGGA AGACTGTCCT TGAATCTTAA CTGTCTCTCG GTCATCTCAC CTTTGACGGT	2340
CCCCTTGATA TCACTAGTCT GGAATACAA GTCTAACACT TGCTCGATAC TCTGCCTATC	2400
TTTCCCTTCT AGGGACTGGG CAATGGCTGT TGCCTTTTGA CCAATGGTTT CCTGACGATG	2460
ACTCAGATAA GTCGAAGGAA AAAGAAAATA AATAGCTAAA TGAAGGCAGA TAACCAGAAC	2520
ACTAAATATC GAGAAGGTAT AGATAAATAT CTTTGCAAAAT AAACCTGTTC GTTTCATTTT	2580
CGCTCCAATT TATAACCAAC ATTGCGCACA GTGAGGATAC AATCCAAGTC TAGCTTTTTC	2640
CGCAATTCCT TGATATAAAC ATCAATAACA CGGTCAAAGG GAACCTCATC TGTCGCTTTC	2700
CAGACGGCAT CGATAATCTG AGATCGAGTC AAGGCCCGGC CTTTATTTT CACTAGATAG	2760
TCCAGAATTT CCAACTCTTT GGCATTGATA GGCATTCTT GACCTGCGAG GCTTGCACTG	2820
TAGCTTTCAA AGTCCACCTT GGTATCCTTG TAAGAAAAGA TTCGTCTCTG ATCGTAGTAG	2880
CGCTTGAAAA TCGCGTCCAC CCTCACTTTT AAAAGGAGA GGGAGAAAGG TTTTTCAGA	2940
TAGCCATCTG CCAAAGAGGC AAAGGCACTC ATCTTGATTT CCTCATCTTG AAAAGCTGTC	3000
AACATCAAGA CAGGAACCTG ACTGGTTTTA CGAATCTCAG CTAGGACTTC TAAGCCGTTG	3060
AGCTTGGGCA TCTGGATATC CAGTAAACC AGGGCCACCT CATAGCTAGA AAATTGCTCC	3120
AGAGCTTCCT GACCGTCCGC TGCCTCAATA GTTTCATAGC CACAATCCGT CAAATAATCA	3180
CTGACCCCTT CACGGATCAT CTCCTCATCT TCTACAATTA AAATTTTCAT ACTTTAACTG	3240
CTCTCTATTT TTTATTTTTC TTAGAATAAA TACCTACCCT ATTTTCTATT ATAGTCTCTT	3300
GCTGGCCTTT TGTCTGCAAG CAACTGACCA CTAGATAAAA CGTTGTGAAA TTCCTTTCTC	3360
ATAAATTCCTA TAACTTTAGT ATATTATATT TAAGCACTAA AGTACAAAGA AAGCAACTGA	3420
AAGCAATGAT TTTCACCACT GCTTTCGGAT TTATTTTGAA TTGTTAAATA GCCATTCTTA	3480
TCCACTATTC TTGAATAGAA ACACAAGATG CAATCTTTAT TCTAGACTCA TTTTTCAAA	3540
TTTATTCAAC ATCCAGCAAG AGCTCTTTTG GTTGTCTTCT AAGGAGATTG CTTGAAGCAA	3600
GCGCCATAAC GAGAACCCT AGAACCAAG CAAGGACAAA AATGATGATA AAGTCTGATG	3660

942

TCTGAATGGA AATGTCTAGG CTCGACAAGG TCTTGCTAAA GCCATCTACT TCTGCACCAC	3720
CACCAAGGTT AGAGGCTTGA GCCGCCCTTAC TAGCCTGTTT GGCAACACCT GAAGTCACAT	3780
TGGCAAGGAC AGTGTTCCTCA ATTGCACGGG CAGTGTAATT AGCTAGGAAG TAAGCAGAAA	3840
CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCCT	3900
GCTTGAGGCC GATAGAGAGG AGAATTCCCA CTTCTTGCG ACGGGCGTTG ATCCAAAGGC	3960
TGAGCAAGAG GGCAAGGAGG AGAACTGAGA AGTCAAGCT ACCCCAGAAG AGGAGGTTGG	4020
CCATCTTGTA CATACCAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTGA	4080
CGAGTGCTGA GCTCTTCCAG TTGATACCAC TGATGCCATT CAACTCTTTC ATAACATCAT	4140
CCAAGTTCTT GTCTGCTGTT ACAAAGAAGG TTGCGTCCCC ATAAATGGCT GTGTCTTCTG	4200
TGTATCCATA AAGTTTTCGA GCAGTGTGAA TGTCTGTAAT AGCTGTGTTT TCGTAAAGTT	4260
CTTGAGTA GGTACTGCT GACTTATTAT GACCATCAAA GAGTCCCTTG ATTGTCACCT	4320
CAACTGTTC CTTGGCTCCT TTTTATTAT CTGCATCGTA GATATTAGAG TCCAGTTTAA	4380
CCTGTCCCC TACTTCCAG CCGTGTGTTG CTGCCAAGTC CTTGTGCAAG AGGATTTTAT	4440
CCTGTGCTC GTTGGTTAAG TGCTCTCCTT CGACTAGTTT ATAAGAACCA GAGACAACT	4500
TGTCTTCTT AGAGGAGTCA TTGACACCTG TAATCATCAA GCTACTTCCA AAACGCTTGG	4560
CACGATCAGC AGTGAGATTC TTCTTGGTTT CTGGCGTTTC AATCAGGTCA TATCCAGTCA	4620
AATCTCCGAT AGCGTTGATA CGTTTGACAT AAGACTCAAT GGCCTTGTTT TCGGTGATTT	4680
TTTGTATGTC TTCACCCCTG ATATTCCCAG CACCACGAGG CGTTCCTTGG TTGACGCGAC	4740
GATTGATTG CATGGAGAAG CTATTGGTGA TATTTTAAA GGTCTCCTGA GAAGCCTTGG	4800
CAGTAGCTCC CTTGATTGAC AAGCCGACCA AACTCAAGCT CGCCATGAGG AGAATAATCA	4860
GGAAGATGAC AATCGATTTG AAAAATTCC TTGTAACATA GGCAAATGCG TTGTGTAACA	4920
TAGATTCCCT TTCTAGATTT TGTTTAAATC ATTCTATTAA AATAAGCTCA AATTATTAC	4980
TAGTATTGCG CGTTTCAGTC AGTTTCTTAT CCTTTAATTC AAGTGTAATA TCTGACGCTT	5040
GTGCCACTTC TTTACTGTGA GTTACGACAA TCACACATTT ACCTGTTTTC TGGGCAAGTG	5100
ATTTGAGTAG TTCGACAATA TCTCCAGCAG TTTTAGGATC CAGATTTCTT GTTGGCTCAT	5160
CAGCTAGAAT AACTGGAGCT TCTGAGACCA AACTGCGAGC AATGGCAACA CGTTGCTGTT	5220
GACCACCTGA TAACTGGAGA ACATTCCGCT TGATCTGGCT TTCATCCAAA CCAAGCTCAA	5280
GAAGTGTATT CTGCTTGCC TTTTGTGTA CCAATCGGAT ATTTTCCAGC GGAGAAAGAT	5340
AATCTATCAA GTTATAATTT TGAAAGACCA GGGAAATATG GTGCATGCGA TGGTAAGAAT	5400
AGCCCTTCTT ACGAATATCC TCTCCTTGAA AAAGGATAGA ACCTTCAACA GGAATATCTA	5460

943

GACCAGCAAG TAGGGACAAG AGTGTGGATT TTCCTGCTCC TGA	5520
CTCCCCA ATAATACTGT	
AAAAATTTTC GGGTTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT	5580
TATAACGGTA GGTAACATCT TGTAATTGTA ATAAAGTCAT GATTTCTCCT TCTTAACTAA	5640
TAGATGATAA AATTTCTTTC GGTGATTTTC TAAATAAGAA TAGGAAACAA AGGGCTACAG	5700
ATAAGCAACT AAGCAGAACT AGAAAAACAT AGGATTCTGC AAAAGATAAG ATGCTAGTTG	5760
ATAAACTGCT TGCTTTGGCT AGTGATCTT GTAAGCTTGC CTGATCTCCA CTGCTAGTA	5820
GAGTTTGAG TAGGTAAGTT GTGATTGCGT TTCCTGCAAC AAATGCTGGA AGCAAAGCTC	5880
CAAGAGATAC CAAAACCTACC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC	5940
CAAGTGCAAG TAAAATCCCC ACTTCATAGA CCCGTTCTCT CAACCAGAGA GACAAAACCA	6000
GAATTAAGGC TCCAGCTCCT GCTATCAACA TCCCATAAAG GAAGATGGTC AGGAAGGTTT	6060
GGAAGTTGC AACTGAGTCT TTGATTTGTT CAAAAGCCTT GTTTTCCTTT TCGACTTGGT	6120
AGCCTTGATT TTCCAAGGCC AAGTTTCTA CCTGCTTCAT GAGTCCGTCC ATTTCTTAG	6180
GATTTTCTAC ATAGAAGCGT GCTGCACTGA CTTGAGCTTC ACTATTGCCC AAAAGGGTTT	6240
GGTACTTTC ATAGTCTGTA AAGACTTGAT TTCACTGAA GTCAGAAGAC AAGCCTGTGA	6300
ATTTCTCTTG TTTTACCA GAAAAGATGC CGATAATCTC AACTCTACT GTTGTCTT	6360
TTCCAGATTC AACTGACCA GCATCCAAGC CAATCTTGTG ATGAAGCGAA AGACCGTTCT	6420
TCTTAGCCAA TTCTTCGTGG ATAAGGATTT TCTTGAATC CCCTTTTGA AGGTGTCGCC	6480
CTTCTTTTAG ATTGAAAGCC GAACTGGTAA AGGTTACATC CTTGGATGAA TCCTCAAGAG	6540
CCGTAAAGCT AACCAAGTTA TTGTCTGCAG CTGATAAATC ATCACGCTCC ACGCTCTGCT	6600
CGCCAGTCAC TGCTTCCTTG TCTTTTAGTT TTGCGACCGT CTCAAGTTCA GGAGAGACAT	6660
TTCCAGCCC CTTAATCTTG CTTACAGATG CTAGGTCTGA CAACTTGAAT GTCTGACCAT	6720
TCTCTATCTT CTTAATAGAA AAAGATGTAT TGAGTGATTT ATAAAGATTG CTTTCTACTG	6780
TTTGTGGA CTTTATCAGA GTCAACAGG CTGAAATTC GGCCAATAAG ACCAATAAAA	6840
TCAGAAATAA AATAAACTT CTCAGTCGCT TTCTGCTGAC ATAAGCCCAA GATCTTTGGA	6900
TTGGATTCAT TTGTCACCTC CATATTTGTA AGACTATTAT AAAACCCAAA TATGAAATAT	6960
TTATGAAATA CGAAAAAAA ATATCGAGTA GGGGATAATC TCTAGCCCCT CTCACACCAC	7020
CATACGTGCC GTTCGGCATA CGGCGTTCA ACTAATTTT AACGCATGTC GTTCAAGGTA	7080
ATAATCCAAA CACGAAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT	7140
AAGTACCGAC TTCTGAGCTA CTATAGTAGA TTGAACTAG AATAGTACAC CTCTACTTCT	7200

944

AAAATATTGT TAGAAATCGA TTTGACTGTC CTGAACAATT CGTCCTATTC TTATTTCATT	7260
TTACTATAAT TGATAGTGGT CGCCCCAGCC AGATACCTTA TCTGCTATCC ATTTAGGAAC	7320
CCCTAACTTA AGCAATCCCC ATAATCGTCT CGATTTCCTC TTCCATTGCT TCCAGATAAT	7380
CACTCGTAGG CGAGTACGCA AGCGCTCATC TATGCTAGTG ACTATACTTT TCATATTTAT	7440
AATTCATTCC TTTCGTTTCA CTCAAGGCAC AACACAGAAT GAAAAAGTGT TGTGATCTTT	7500
ATTTTGT TTTT ATAATAATAG TGAGAAAACC TATCACTACT ACAAATCACG GGGAGGTGAA	7560
TAAGTGAGTG GTACAGCCAC TACCTCGCAT ATTTTGTGAC ATCATTTAAC GGTACATAAT	7620
AAGTTGTACC ATCTGAATAA GTTGCTACAA TATCATTTGC ATGCTCTCCT TCACCTTTAG	7680
CAAAGGTTGG AGCTCCTGCT GGATGATTTT TATTTGCCTC TTTCAAATTT TCAATAATGG	7740
CATTTTCTCT GTATCTTTTA TATTATCAGG ATTTTTCCT AAGATTTTGT CTGGATATGT	7800
CGGTTTAGCA GAAACAATTT TTAATTTTAC TTCTTTT TTTCAAGCAC TTGTCCAGTT	7860
TCCAGCATT TCTTAGCAT TTAATTTTAC AGTAATTCCT GAACTAGGAA CTTCAGTAGC	7920
AGGTTGATTA TCAACATTAT TCAACTTTAA TTTCAAAAGA GCTGTTGCAT CAGACGTTTT	7980
ATCAATCGTT ATATATAATG ATGAATTGTT ATTATAACA GTTCCTTCAT ATTTAGCTGT	8040
TTGTGAGCTA CTTGAAACAG AACTGAAATT ATACCCACTA CCTCCCTGAT TATCTTCAAT	8100
GCTTACGTCT AAATGAACTT CCCCACTATT ATTTGGCTTA GCAACAACCTG TTATAGTAAA	8160
ATAACATAAA ATTTGCATAA ATAGATTAGG GAAATCAAAG CAGCTTCTAG GAATGTTTAA	8220
GCAGTCACAG TGTACTTTCC CAGCATCAAG CCACTATAAC TCTGCACATA AAAATGGAGA	8280
AGATGGCAAT CCTCTTCTCC AAATATTAAC TTCTTTACAA ACCAACTATA GTTGACAAAG	8340
AACCTAAAAT CAATTGATAA CACAAGGTCA GGTCGGTCAA CTCTTTCAAC TGAAGCCCTG	8400
TCAACTCTTC CCATTTATCA ATCTTGTATT GGAGAGAATT GCGGTGCAGA TAGAGTTGCT	8460
GGGCTGTTTT AGTGAGAACA GCACTATTTT CCCAAAGAGA GAGAATGATT TCCTGAATCT	8520
GATCTTGATC CAAAATCATC TGGTGTAGAC ATTCCCTGAT TGGCTTCAAG TCCACGAGTC	8580
TTTCTCCCAT ACTCCAAAGA TAGAGCTGAG AAAAAGTATG AACACCTTGG TGACCCTGAC	8640
GCCACCATGT CTTGAACAAA TCCCCTCAG CTTTGATTAA GTCTGATAGG GCTTGATGTC	8700
CCGTCTGAGA CCAAACCTGA CCCAACATGA TAGAAAGACG AAGTCCAAAG TCATACTCAA	8760
CCGCTTCAAT CGTATCACTT AAAATATCTC TTACAGAAGT GTATTTGTCT TGTGAAGCA	8820
CGAAAACATA ATCCTGAGCT CCGACCTGTA GCACTGTCTG ACAATTCGGA AAAAGAGTCC	8880
GCATCATATC TAGCCAAGAA GCCAGATTTT CCTGCTGAAA ATAAGAAAGA TGGCAATAAA	8940
CCAAGTGAAT CTTTTTAAAA ACTTGCGGTG CCTGTCCCTT GCCCTCAACC AGATAGGAAT	9000

945

ACCAAGGGTT TAGCGAACGA GCCTGCTCCT GCTGGGTCAA AAGGGCAACC AACTGCTTTT	9060
CACGCTCGCT GAGCCCAGCT TCCTCCAGCA AAATCCACTG CTGAGAAGCT AAAGGGAGCG	9120
TGAGATAGCC CTCTTTCTCT ACTGGTTGGT CTGAAATCCG AGCCTCAGGA AACCAGTCTT	9180
GTAGTTCTTT TGCCCTCATG TTCTAGCCCT CCACCTTTTG GATGCACCAT GAAACCAAAC	9240
TCTCAAGACG TTCCAGATTG TCAGTCATAT GGAGATAGCC CATAACCGCT TCAAATCCCG	9300
TGGACATACG ATAAGTCACG ACATCTGCAT TTTTAGCCTT TGTGTGGCTA TTGGTATTGC	9360
GGCCACGTTT GTAGATTCTT TCTTCTTTTT CCGTTAGGAC CTGCTCCTCC AACATGAGAG	9420
CAATCAGGCG AGCCTGAGCC TTGGCTGACA CGTACTTAGT TGCTTCTTGA TGGAGTTTAT	9480
TGGGTTTGGT CATACCTTTG AGGATGAGGT GACGGCGAAT ATACATAGAA TACACCGCAT	9540
CCCCCTCAAA GGCTAGCGCA ATCCCGTTAA TGAGATTGAC ATCAATCAGC TGTCCACCTC	9600
ACTCCATCCT TGGTATCAAG GAGCTTAATT CCTTGAGTAA CCAATTGGTC ACGGATTTGG	9660
TCTGCTGTCG CAAAGTCACG ATTGGCACGC GCCTCTTGGC GTTTTTGAAT CAAGTCTTCA	9720
ATCTCTGCAT CCAAACTTC CTCAACAAAG ACAATTCCAA AAATTTCTAA CATATCTGCA	9780
AGAGCTTGCT TGACACTTGC ATCATAGTTC CCTGAGTTGA TCCATTTGGC CATTTCAAAG	9840
ACAACTGTGA TACCGTTGGC AGCATTAATA TCTTCATCCA TAGCTGCTAC AAACTTATCT	9900
TTAAAGTTT GTAACCTTG GGCATCCACA TTTCCTGTAA ATGGTTGTTC GTAAGTATTC	9960
TTGAGATACT TGAGATTGGT CTCGGCATCG CGAACTGCCT TTTCCGTGAA GTTGATAGGC	10020
TTACGGTAGT GCTGGGTCGC AAAGAAGAAA CGAAGTACTT GCCCATCAAG AGTTTTAAGG	10080
GCATCGTGTA CCGTAATGAA GTTACCCAAG GACTTAGACA TTTTGACATT GTCGATATTG	10140
ACAAAGCCAT TGTGCATCCA GTAGTTAGCA AAAGCCTTGC CTGTTTTAGC TTCAGACTGG	10200
GCAATTTTCAT TGGTGTGGTG TGGAACTCT AGGTGAGCTC CACCACCGTG GATATCAATG	10260
GTATCACCTA AAATCTCTGT CGACATGACT GAACACTCAA TATGCCAACC CGGACGTCCA	10320
GGTCCCCAAG GACTATCCCA AGAAATCTCA CCTGGTTTGG AAGATTTCCA TAGAGCAAAG	10380
TCTACAGGAT TTTCCTTACG AGCCGTTTCT TCATCGGTAC GACCTGAAGC ACCTAGCTCC	10440
AAATCTTCCA AGGTTTTATT AGCCAATTTA GCATAGTTGT GGGATTTTTT TACACGGAAA	10500
TAGACATCCC CTTGACTCTC ATAGGCAAAG CCTTTCTCGA TCAAGTCTTC CACAAAACGG	10560
ATGATGTCTG CCATAAACTC CACTACACGC GGATGGCGAG TCGCAGGTTT CACGCCCAAT	10620
GCCGTCACAT CCTCACGAAA GGCAGCGATG TACTTATCCG CAACCTCCTG AGGCGTGATA	10680
CCTTCTTCCC TGGCACGGTT GATAATCTTA TCATCCACAT CTGTAAAATT GGAAATATAG	10740

946

GCAACCTTAT ACCCACGGTA CTCAAAATAG CGACGAATCG TATCAAAAGC TACCGTCGAA	10800
CGGGCGTTTC CTACGTGGAT ATAGTTGTAC ACCGTTGGCC CACAAACATA CATCTTGATC	10860
TTGCCGTCCT CAATCGGGAC AAATCTCGC AAATCACGAG ACATGGTGTC ATAGATTTTA	10920
ATCATAAATC ATAATCAGGA AAGCTGAAAT CCAAGAACAA TTAGTTTCAT CACTAAAAGT	10980
TCAAGTAAAT TTCAGTCCGA ATATCTCTAC ACTTCGGAAT CCCTTGCTCC TTTCTCATTC	11040
AGATAAACCA CCTGAGTCTG TTTGACAAAG CCAATTTTTT CATACAAACG TTGGGCACCT	11100
ACATTGCTAT CTTCCACTGC AATCTGAAAT TCCTTGTCAT TTTGCTCAAT TAGTTGGTTG	11160
ACGAGGGATT TTGCTAAGTA GCTTCCATAG CCTTTTCCAC GTTCAGGTTC CAATATTGCT	11220
AAACCGTAGA GGTAATTCGT ATTAGTCGAT AAATCAACCG TACAAGTCC AATAACCTGA	11280
CCAGCTTTTA ATAAAATATA TAGTCGGCTT TCTGGATCTT TCAGAGCTTC AGCGACATAT	11340
CTATCCACAA CTTCTCTCGA TTCTGTTCC TCTGAAAATG CCTGAAATTT TAATTGACTA	11400
ATTTGATCCT GATACGAACT ATCTGCTAAC AAAACTTCAA GATGGGAAAC ATTTGCTAAC	11460
GGATAAGGTC TTCTATCCTT ACCTAACCA GTTTCTGTCT CTTTCATCTC GATTAGTCCC	11520
CAGTTACTGG CAAAGTCAGG ATGATTCTCT AAAAAATAC GTTCTGTCTG AAAAGTGAAT	11580
GACCGAATGG GGAAAGAAGC TGTTCCTCTC TCAAACTAG TAAACAATGC ACGCGCAATC	11640
CCCTGACGGC GATGACCTGG ATGAACCACT ATCGTCACTT CTACATCTTG GTCATCTGCA	11700
TAGACAGTTA ATAAACCAAC AAGTTCGCCT TTTTCATAAT AAAGGAAAAA GGCGGGCATG	11760
TTTGGGTCAA AATTAAGCAT GTTAGAGAGA TAGGGATCGC GATAGGTACC GTCATAGTTT	11820
TGGCAACAGT TAATTACTTT TTTGCCTCA GATAGCTCCT CTTGGCTTAA CTTGTTCTTT	11880
GCTTGAATCA TATAGGTATC CTCTACAAAC CAGACGATCT GTGACTGGCA TCTTTAGCCT	11940
GCTCGAGTTT ATTGACATAA TACTCTCGTT TTTCTTCGAC TTCGTGAATG ACAGGCTCAT	12000
CTTTCTTACC ATGAAGACGG ACAATCTTGG CCGGAATACC GACAACCGTC ACGTCACTAG	12060
GTACATCTGC TACGACAACT GCTGCAGCAC CGACCTTGGC ATTTTCACCA ATTTCCACAG	12120
GCCCGATAAC TTGGGCATGG GCTGATATGA GGGCTCCCTT TCGTACAGTC GGATGGCGTT	12180
TGCCACAGTC TTTCCCTGTT CCCCCGAGAG TCACTCCGTG ATAGAGAAGA ACGCCTTTTT	12240
CAACAATCGC TGTCTCTCCA ATCACCAGAC CAGAACCATG GTCAATAAAA ACACCTGAAT	12300
CAATCTGGGC TCCTGGATGA ATCTCAATCT GAGTCCAAAA GCGCCAAAAC TGACTGTACA	12360
TACGAGCTAA TAGTTTGAAG CCGTGTCTCC AGAGAAAATG CGAGAGACGG TGGGCCGCCA	12420
AGGCCTTGAC ACCTGGATAA GTCAGCAAAA CCTCCAAAGT GGTGCGGGCC GCTGGATCAT	12480
TTTCTTTTAC AATATCAATG GTTTCGCGCC ACCACCCCAT ACATTTCTCC TTTCTTATT	12540

CTGAATCTTT TGATGTTTCT GTAAATTCCTT TCTTAGGTTT GTAATCCTTT TGATGACGTG	12600
GGCGGTGAGG GCGCTCAGAC TTTCACCTT TTTCATCATG CTCAGGTTTT GGCGGACGAG	12660
GTAGAAGAGC CTTCATAGAG GCATCGATAC GGCCTTTTTC ATCAATTTTG ATAACCTTAA	12720
CATCAACTTC ATCCCCGATT TCTACCAAAT CCTCTACAG ATTGGTACGA GTCCAAGCCA	12780
TCTCAGAGAT ATGAACAAGG GCATCTGTCT TATCAAAGAG GTTAACAAAG GCACCAAATT	12840
TCTCGATACG AACGACTTTA GCACGGTAAA CTTCATCCAC TTTGGCTTCA CGAACCAAAC	12900
CAGCAATAAT TTCTTTGGCA CGGTAAATAG CATCTTGGTC ACTAGAGTAG ATAGACACAT	12960
TTCTTCTTC GTCTATATCA ATCTTAACAC CTGTTTCAGC GATAATCTG TCGATGGTTT	13020
CTCCACCTT ACCGATGACA ATCTTAATCT TGTCCACATC AATCTTGATC GTATCAATTT	13080
TCGGAGCAGT TGGAGCCAAT TCTGGACGAA CTTCTGGAAT GGTGCTTCA ATGACATCAA	13140
GGATTTCAA ACGCCCTTC TTGGCTTGAG CAAGAGCCTC CGTCAAGATT TCTGCAGTAA	13200
TCCCTTGAAT CTTGATATCC ATTTGAAGGG CTGTAATCCC ATCAGAGTA CCTGCAACCT	13260
TGAAGTCCAT ATCTCCAAAG TGATCTTCCA AACCTTGGAT ATCTGTCAAT ACTGTGTAGT	13320
TATTTCCATC TGAGATAAGC CCCATAGCAA TACCAGCTAC TGGCGCCTTG ATTGGCACAC	13380
CACCAGCCAT AAGGGCAAGA GTTCCCGCAC AGATAGAAGC TTGAGATGAA GAACCGTTTG	13440
ATTCAAAAC TTCTGCTACT AGACGGATAG CGTAGGGGAA TTCTTCCAAG CTTGGCAAGA	13500
CTTGAGCAAG AGCAGCTCA CCAAGGGCAC CGTGACCGAT TTCACGACGA CCTGGCGCAC	13560
CGTAACGACC TGTTTCCCT ACAGAAATTT GAGGGAAGTT ATAGTGGTGC ATAAAGCGTT	13620
TCTTGACTC TGGATCCAAA CCATCAATGA TTTGAGTTTC TCCCATCGGA GCCAAGGTCA	13680
AGACTGAAAG AGCTTGAGTT TGCCACGAG TAAAGAGACC TGAACCATGT ACACGAGGAA	13740
GGAAGTCAAC AACCAGATCC AAAGGACGGA TTTCATCGAC CTTACGACCA TCAGGACGCA	13800
CCTTGCTTC TGTAATTAAA CGTCGCACTT CTGCGTGTTT CATTTGTTC AAGATTTCAG	13860
CCACATCACG CATAATACGG TCAAATCTT CGTGGTCCG ATATTTTCT TCGTAAACGG	13920
CAGTCACTTG GTCTTTCAT ACTTGAGTCG CAGCTTCACG GGCCAATTC TCTTCTACTT	13980
GAACTGCCTT TTGGAGGTCA CTGTTGTAGG CTGCAATGAT TTCAGCTGC AATTCAGCAT	14040
CCACGTGAAG CAATTCCTT TCTGCTTTT CTTTACCGAC AGCAGCAACG ATTTCTTCTT	14100
GGAAGGCAAT CAATTCCTT ACAGCTTCGT GCCCTTTAAG GAGCGCTTC AACATGATTT	14160
CTTCTGACAA TTCTTTGGCA CCAGACTCTA CCATGTTGAT AGCGTGCTTG GTTCCAGCTA	14220
CTGTCAATTC AAGAAGAGAT TGCTCTGCTT GTTCTTGACT TGGGTGATG ATGATTTGGC	14280

948

CATCTACATA TCCCACCTGT ACCCCAGCAA TTGGTCCGTC AAATGGAATA TCTGAAATAG	14340
ACAGTGCCAA AGATGAACCA AACATAGCAG CCATTGGTGC AGATGCATTT TCATCATAAG	14400
AAAGCACTGT ATTGATGACT TGGACTTCAT TACGGAAACC TTCCGCAAAC ATAGGACGAA	14460
TCGGACGGTC AATCAAACGC GCTGTCAAGG TCGCATCTGT TGAAGGACGT CCTTCACGTT	14520
TCATAAAGCC ACCAGGAAAC TTCCCAGCCG CATACATTTT TTCTTCGTAG TTGACTTGGA	14580
GTGGGAAGAA ATCCCCAGTT GCCATTTTCT TAGACATAAC GGCAGCAGTC AAGACAGTTG	14640
ACTCACCGTA ACGTACGACA ACAGATCCAT TTGCTTGCTT AGCAACCTGA CCAGTCTCTA	14700
CAATTAATC ACGACCCGCA AAAGTCGTTT GAAACACTTG TTTTGCCATT TTAATCCCCT	14760
TTGGATTGAT GAAATTATAC GCCTTGCCTA CAAAGATCAA GATACCAAGG ACGTCAAAAG	14820
CAAAGTAAAA ATAGGAACT GACGAAGTCT TCGATGAAGA CAAGACAGTT TATCTTTTTT	14880
ACACAGCTTT TCGGCCGTGT TCAATTACAC AAGATATTTT GGACGGTTCG GCTTGCCGAA	14940
CATTTCTGTA GAAAAATAGG AAGGTGACGT CGCACTCGAC GAGTGCTAGG AAGCTTATCT	15000
TTTTTCTTAA GAAATGAGAC CAAAATTCAA GTCATCAAGA TACCAAGCCG TCAAGCAACT	15060
CAAAGGAAGA TAGGAAATCG AACGACGGAG CGACTACTCC TAGGGAGATT TATCTTTTTT	15120
CACAGAGTTG TAGGCAAGTT CAGTTTTCAT GATACATCAT TAGAAAGGTT TAATACTAAA	15180
GTATCTAAAG CTTTCACGCT AATCGCTATC GGGCGATTAG CTAAATGCTT TACTAACTCT	15240
CTCGTCAAAT AACATCGATT TGAATCACTC GTGTCGTAA ATCTTACAGT TTAAATGCAT	15300
TGTATTATTT AATACCTTCA TCTTTGTATC AAGTACGTAC AGAATTTATT TTATCATATT	15360
TTTCTTAAAA AGTGAGGTCT TTACCATTAA AAAGGAACCA TTCCCCTCAC CTGAGAAGAA	15420
TGGTTTGCTT TTATTATCCT AGAGACTGGT GATTAAACAA GGCATGGGTT GCTTGATGGA	15480
TGTATTTTGC TGTATCAGCA TTATTCATCG TATAGAGATG CACACCGGCA ACATCCTGAG	15540
TTACCAAGTC CACGATTGG TCCACTGCAT AGGCAAGTCC TGCTGCTCTG AGCGACTCAG	15600
GGTCATGCTC ATACTTGTCT AAGATGGCTT TAAATTGCG TGGAAGATGG ATATTCTCAC	15660
AAGTCTTCAA GAGTCGGAGA GCCTGATTTC GATTGAGAA TGGCATAATT CCTGCATGAA	15720
TGGGAACATC AATCCCAGCC AAGATACACT TGTCTGAAA ATCATAGAAG CGCTCATTTG	15780
CAAAGAAGAG CTGAGTTACG AGGCTCGAAC AGCCTGCATC CACTTTCTTC TTAAGATTTT	15840
GAATATCTGA AATCTGATTT GCGGAATCTG GATGCCCTTC TGGATAGCAA GCTCCAATAA	15900
TATCAAAGTG AGGGGTTTGT TCCTTGATAA ACTCAATCAA GTCGGTTGCA TAGCGGAAAT	15960
CCTTTTGTGG TTCCACGTCT GGAATAATAT CCCCACGAAG AGCCAAGATT TTCTGCACCC	16020
CAACTTTGTC CAAGTCAGCA ATAGTTTCAG CAACCTTGTC CTTAGTTAGA TAAATAGCTG	16080

949

GCAAGTGGGC AATGGTCGGA ATCGCCAAAT CATTTTGGAT AAAGTCAGCC AAACGAACCG	16140
TCGTTTCCTT GATATTAAAT TTATTATTGC TGGCAGTTAC ACTGATAAAA TGGGGAGCCA	16200
ACTCCTGCAT ATCCTGCAAG GCTGAAATAA TGTTATCATT ACCCACGGCT GGGTTTGGAG	16260
GGAACACTTC AAATGAGAGT GACGGTGTTC GCGTGACAT ATGTAATAAC CTTTCTAGT	16320
TGATTTCTTT TTGAACAACC ACTGTATGGA GAGAAATCCA ATCTTACAAT TTCTCACGCG	16380
CAGCTTTAGC TGCTTCAACA AGGCGGATCA AGCTTCTTTT TGTTTCTGGG ATACCACGTG	16440
TTTTCAAACC ACAGTCAGGG TTGATCCAAA CTTTCTTGCT TGGCACTTTA GCAAGGATGG	16500
CTTCGATTGT GTTGTGATTT TCGCCTTCAT TTGGTACACG AGGTGAGTGG ATATCGTAAA	16560
CCCCAGGTCC CACTTCTGTT TGGAAGTTTT TCGCTTTGAG TTCGTCCAAG ATTTCAAGGT	16620
TTGAACGGTT AGCTTCAAAG GAAATAACGT CTGCATCCAT GTTATCGATA GCTGGGATGA	16680
TATCTGTAAG TTCTGAGTAA CACATGTGAG TGTGGATTTG TGTGTCTGGC GCTACTGTTG	16740
AGTGTACCAA GCGGAAGGCA GGAATAGCCC AGTCAAGGTA GTCTTCGTAC CAGTCGCTAC	16800
GCGGGAGTGG CAATTTTTCA CGAAGAGCAG CCTCGTCGAT TTGGATGATT TTCACACCAG	16860
CAGCTTCAAG GTCAAGTACT TCATCCTTGA TAGCAAGGGC GATTTGAGGA GTTGAATCCT	16920
TGATAGAGAT GTCTTCACGT GGAATGACC AGTTAAGGAT GGTAACAGGT CCAGTCAACA	16980
TACCTTTAAC AGGTTTGTTC GTACGACTTT GTGCATAGCT AGACCATTTA ACAGTGATAG	17040
GGTTAAGACG AGTGACATCA CCCCAGATGA TTGGTGGTTT TACCCACGC ATACCGTATG	17100
ATTGTACCCA TCCATTTTGA GAGAAGAGGT ATCCTGACAA GTTTTGACCG AAGTACTCAA	17160
CCATGTCATT ACGCTCAAAT TCACCGTGAA CAAGGACATC AAAGTCAATA TCTTCTGCC	17220
ACTTGATCCA TTCGTCAATC GTTTCAGCAA GGAAAGCGTC GTACTCTTTT TGAGACAATT	17280
CACCTTTACG GTAAGCCAAA CGTTTGGCAC GAACTTCTTT TGTTTGAGGG AATGAACCAA	17340
TCGTTGTTGT TGGAAGAGCT GGAAGTTTGA AAGCTTCTTC TTGGATAGCT TCACGTTCTG	17400
CAAAGGCTGG CAAACGAGTG TAGTCTGCGT CTGTCAAGCC AGCGATACGC GCACGAAGTT	17460
CAGCATTTTC ACCAACACGC TCAGTCGCAA AGAGTTCTTT GTTGGCTGCA AGAGCTTCTG	17520
AACCTTGACC ATPTCGGATA GCATCCAAGT CACGGATTTT ATCCAATTTT TCAACTGCAA	17580
AGGCAAAGTG GTTCAAGAGT GCTGGTTCAA ATTCTTCATT AGCAGTTGTA AATGGCACAT	17640
GAAGAAGTGA GCAAGAGCTT GTCAAAACGA TGTTTTCAGC TGGAATTTGC TCAAGAACAG	17700
CCAAGCTCTT TTCGTAGTTG TTGCGCCAGA TGTTTTCACC ATTGACAATA CCTACATAGA	17760
GAGTCTTGTC AGCTGGGAAG CCACCTTTAA CGAGTTCAAG AGTTTCTTTA CCTTCAACAA	17820

950

AGTCAAGACC GATAGCATCT ACTGGTAAGT TTACAAGGTC AGCGTATACG TCACGAACAT	17880
CACCGAAATA AGTTTGAAGC AAGACTTCAA GACCTTTTTT GTCAGCCAAG AGTTTGTGT	17940
AAAGGTTCOA GAAGAGAGCT TTTTCTTCAG CTGTCAAGTC TTTTACAAGA GCCGCTTCAT	18000
CCAATTGGAT GCGAGTCGCA CCAAGTTCAG CCAATTTAGC AAAAATTCT TGGTAAGCAG	18060
CCACTAAGCT ATCTACGAAG TCGTCTGCTT TCACGCCTTC TTCAAAGTCT GACAATTGAA	18120
GGAAAGTGAA GGGACCTACA AGAACAGGAC GAGTGTTCOA TCCAAGTCTT TTGGCTTCTT	18180
GGAACATCATC GAAAATCTTG TGACCAGCCA ATTTTACTTG AGTGTCTTTT TCAAAATTTAG	18240
GAACGATGTA GTGGTAGTTA GTGTTGAACC ATTTCTTCAT TGGGAAGGGCG CGAACGTCCC	18300
CTTTTTCTCC CTGGTAACCA CGTCCCAAAG CGAAGTAGCG CTCAAGGTCA GACAAGTCCA	18360
AGTTTTGAAC GGATGCAGGC ACCACGTTGA AAAGGAAAGC CGCATCTAGG AAGTTATCAT	18420
AGTGAGAAAA GTCATTTGAT GGAATTCAG TGATGCCTTT TTCTTTGACA ATGTTCCAGT	18480
GTTTAGCAGC CAAGTCTTTT GCTGCTGCTA AAAGTTCTTC TTCTGAGATT TCTTTTCTAA	18540
AGTATTTTTT AGTTGTAAAT TTAAATTCAC GGAATTCGCC CAAACGAGGG AAACCGATGA	18600
TTGTAGTTGA CATGATGTGT CCTCCAAAAT TTGTTGTGA AACTATCTTA ACAGAAAAGA	18660
AAGCGTCTGT ATAATTGTAA AAAATTAGGG TTTGATATAG TTTGAACTA TATATCTGTT	18720
TCGGACAAAA GAAAAAGACT TGAAGCAAAC GTCTCAAATC CTTTGTAAAT CTACTTTTAC	18780
AGCTATATTC CAATTAGAAT ACTAAACAT GTTATTAGTA ATTCTTATAA GTGACTATGA	18840
CCTGTATTAT GAAAAGACTA TAACTGATTC TAGTCAACTT TTTCCCTGTT CAAGTGGGAC	18900
GATTGCTAGT GTCTTTCCTA AACTGGCTAG GACTTTTAAAG ACTGTATCCA ACTGAGGACT	18960
AGTCTTTCCT GTCTCCATCC TAGCTATGAC AGGCTGGCTT ATCCCACTGA CTTCTTCCAG	19020
CTTTTCTGA CTGATTCCTT GTTCATACCT AGCCTCAATC AACTCGCTCA TGATAGCCAC	19080
TCGCATATCA CTTTCAAGGA TTTCTCCTT GCTAAAGAGC TCAGATGGAC ATCCTTCCAA	19140
TTACTCCCAA TAGCACTATT CTTCACTACT TAACCCTCTT TTTTPTACGT CTATGTATTT	19200
TTAAAAAAT GAGCGAATTA TGATTCGATA GATTGACCAG TGGGTTTAAA GTTGGTGCTA	19260
GCCTATTTCT TAAGCGATTT TCCTTTTCTA GGATAAAGCA GTTCCTGCTT GCTTAACCCC	19320
AATTTTCCAC GATGAATCCA ATAGTAAATG GTTGAAATTC CCACGTAAAC CCCTTTAGCC	19380
ATCACCATCA TTTCAGGCGA AAATTTTGG TTATGTTTTT GGTATGTAT AGTGGAGAAT	19440
CTTTTCTTTT AGTTTCTTAA GACTGTTGAG CGTAGTCGGC AGAATAAATC TCTTTGAAGC	19500
GCCCTTTTCC AAGACATTTG CGGACTGTCC CACGCTTGAT TTCAGTGTGG ATAGTTTGAG	19560
GAGCTTTTCC AAGTAGAGAG GCAATTTCTC TATTTGATTT TCCTTCTTTT TTCCATCGTT	19620

951

CGATTAAGCG ACGGCTATCG ATTGTCAAAT GTTTCGCTTT TGTAGTATAA TTGCTCTGCA	19680
TTTCTGTGCC TTTTAATCAT TTCAATCTTA AATTGGACTT TTTTACTTG GGTGTACTT	19740
AATCTATGAG GAAGACAAGA AAAAGAATAT CAATCAAGTA AAGTCACAAA GTCACATTAG	19800
CTCCGAGCAA CCATTGCAAA TTGAGGTACT CACACAATGA TTAAAACATT TCTCTCTGCC	19860
CTTTCGGTCA TTCTCTTTTC TATCCCTATC ATAACCTATT CTTTTTTCCC ATCTTCTAAT	19920
CTTAACATTT GGCTATCTAC CCAACCTATC TTGGCAGAGA TTTATGCCTT CCCCTTAGCT	19980
ACTGCAACTA TGGCTGCTAT TTTAAGTTTC TTATTTTTTT TCCTATCTTT TTACAAGAAA	20040
AATAAACAAA TACGGTTTTA CTCTGGCATT TGCTCTTAC TATCGCTCAT ATTACTATTA	20100
TTCCGAACAG ATAAAACCTT TTCTTCTGCA TCAAATAAGA CTAAAACCTT AAAATTAGTA	20160
ACTTGGAACG TCGCTAATCA AATAGAAGCA CAACATATTG AGCGAATTTT TAGCCATTTT	20220
GACGCCGATA TGGCTATATT CCCTGAACTA GCTACCAATA TCAGAGGTGA GCAAGAAAAC	20280
CAGAGAATCA AACTATTGTT TCATCAAGTT GGACTTTCTA TGGCCAACTA TGATATTTTC	20340
ACTTCTCCAC CTACCAATAG TGAATAGCT CCTGTGACTG TGATTGTCAA GAAAAGTTAT	20400
GGTTTCTATA CAGAAGCTAA AACTTTTCAT ACAACACGGT TCGGGACAAT TGTATTACAT	20460
TCGAGAAAAC AAAATATACC AGATATCATT GCCTTGCATA CTGCGCCTCC TCTGCCAGGT	20520
TTAATGGAAA TCTGGAAGCA AGACTTAAAC ATCATTCATA ATCAATTGGC TTCAAATAT	20580
CCAAAGGCTA TTATTGCAGG TGATTTTAAT GCAACTATGC GTCATGGAGC ACTTGCAAAA	20640
ATAAGCTCTC ATAGGGACGC ATTAAATGCA CTGCCACCTT TTGAAAGAGG AACTTGGAAT	20700
AGCCAAAGTC CAAAACCTTT TAATGCAACA ATAGATCATA TTTTATTGCC TAAAAACCAC	20760
TACTATGTTA AAGATTTAGA CATTGTAAGT TTTCAAACT CTGATCATAG ATGTATTTTT	20820
ACAGAAATCA CATTTTAATT ATTTTATATA AAATCACCCC TCTAATGTTT ATAACTAGA	20880
GGGGGAATTT GTATCCTACT ATCGTTTAAAC GCACTTCTGC ATTGACTTTT TCTTCGAGAG	20940
ACGCTTGGAT TTTTTCATA TAGCGTGCAG CTCTCTCGTC CGTTAAGCTG TCTTCTGGAT	21000
TTTGGAAGGT CAAGCTATAA GCCATTGACT TCATACCAAG TCCCAGTTTT TCACCTGAGA	21060
AGACGTCAA GAGTTTGATA TCTGTCAAAC GTTTCACGCC GGCAGCTTGG ATAGCATCTA	21120
CAACTTCTTG GTGAGTCACT TCTGCCTTGA GGAGAAGGGC AACGTCACGG CTGACTGCTG	21180
GGAATTTGGT GATTTCACA AATGGAACAG CAGGTTGGAG CGCCCTTCG ATGGCTGAAA	21240
GGTTAAGCTC AGCTACATAC GTTCTGGAA TATCGTAAGC CTTGGCAGTG ACTGGATGCA	21300
CTTGGCCAAG GAAACCAAGA ACTTGGTCAC CGAGTGAAAT CACGGCTGTA CGACCTGGAT	21360

952

GAAGGCTAAC GATTTCAGAT GTTGCTGTAT AGGTTACTTG GAGTCCCAA CGAGTAAATA	21420
GGGCTTCAAG GATTCCCTTA GCATAGAAGA AATCAACTGG AACTGCTGCT GTTGGAAAT	21480
CTTTTTCAGC AACCAAGCCT GTCAAGGCAA AGGCAAAGCT GTTGATCTCA TTTGGAAGTT	21540
CTTCTTTTGG ATTACCTGTT TGTTCAAAGA CTTTTC CAAT CTCATAAAGG GCCAAGTTTT	21600
TATTCTTACG AGCCACGTTG TAGGCAACGG TATCAAGGAT CCCTGAAATC ATATTTTGAC	21660
GGAGGACTGA ACGATCCACA GTCATTGGCC ACATGAGTTC AGTAAGGTTA CTGGTTGAG	21720
CTGTGAACTC AACTGCTTTT TCAGGAGTTG TCAGAGCATA GGTGATGATT TCTGTCAAAC	21780
CTGCTCCTTC AGCAATGGTA CGAACTTGAC GCGGGAGTTT TTGTATCACA GTCAATTAC	21840
CAGCTGTACC ATCGTCTTTT GGAAGGCTGG TTGGCAAGCG GTCATATCCA TAGATACGAG	21900
CGATTTCTTC AAAGAGATCA GCTTCGATTG TGATATCCCA ACGACGACGT GGTACGCTGA	21960
CTGTAAAGCT GTCTGCATTT CCAGAAAGAC CAAAGCCAAG ACGACGGAAG ACGTCTTCTA	22020
CATCAGCATA AGACAGCTCA GTTCCGAGGA CACGGTTAAC ATCAGCAAGG GTTGAAGAAA	22080
CTTCCACATC AGAGGTATCA AGCTCACCCG CTGAAACGAT ACCCTTACGC ACCGTCGCGC	22140
CTGCAAGCTC TGCAATCATG CTAGCTGCCG CATCAAGGGC TTCATTAACT GTTGCCACAT	22200
TAATTCCTTT TTCAAAGCGA GAAGATGACT CAGAACGAAG GTTCAGGCGA CCACTTGTCT	22260
TACGGATAGA TTTGCCATTA AAAACAGCAG CTTCAAGGAT AACACGACTA GATTTTTCAG	22320
AAATTTCTGT AGCCTGACCA CCCATAACAC CGGCAAGGGC TACTGGTTTG TCAGCAACTG	22380
TAATCAGGAG GTCTGTCTCA GCCAAGTCTC GTTCTTCACC GTCCAGGGTC ACTAATTTTT	22440
CACCATCACG CGCTTCACGC ACACGGATGT CAGTCCCTTC AAATGTGTCC AAGTCAAAAG	22500
CATGCATAGG TTGACCAAAG TAGAGCAGGA TGTAAGTTGT CACGTCTACA ACGTTATTGA	22560
TGGGACGGAT GCCTTCGTTT ATGAGAAGGT TTTGCAACCA TTGTGGACTT GGTGCGATAG	22620
TCACATTGTC CAAGATACGA GCTGCATAGT AAGGCGCCTT GTCTGTCTCA ATGCTGACAG	22680
AAAGGGCATC TGCCGCAGCT TCATTAGTTT CTGTTAGAGT AAATTTTTTA AAGTTGACTG	22740
CCTTGTCTCA GATGGCTGCC ACTTCGTGAG CCACTCCACA CATAGAAAGG GCATCTGCAC	22800
GGTTTGGTGT GATGGAAAGT TCGATGATTT CATCATCCAA GTCTAGGTAA GAAAAGACTT	22860
CCTCACCTGG CACGGCATCT TCAGGCAAGA TTTGGATGCC ATCTGCGAAT TCCTTAGGCA	22920
CAACTGAGTC AGAAATTCCC AATTCACCAA GTGAACAGAT CATTCGAAGT GACTCCAAAC	22980
CACGGATTTT TCCTTTTTTG ATTTTGTAGT TATCAGCGAT ACGAGTCCTT GGAAGAGCCA	23040
CCATGACCTT GATCCCAGCA CGCACATTTG GGGCACCACA AACGATCTGA CGCTCTTCTT	23100
CTTCGCCAAC GTTAATCTGA CAAACATGGA GGTGAGTCTC TGGCACATCT TCGCAAGACA	23160

AGACCTCACC GACGACAATT TTTGAGAGAC CAGCAGCTGG TGATTCGACA CCCTCTACCT	23220
CGATCCCTGT AGTTGACATT TTTTCAGCCA ACTCTTGTGA TGGCACATCA ATGTCCACCA	23280
ATTCTTTTAA CCATTTATAA GATACAAGCA TAATTTAGTT CTCCAGAATG ACAGTTGTCA	23340
CTCTAGTTCT TTTCCTTTCC TATCATTTC A TAGAAGAAT CCTCTTCTTA CCTTAATTTT	23400
TTTCTCAGTA ACCAATCCGT ATCTACTTTT TGACCAACCA TAAAATGATG TTGGCTAAAT	23460
TTTTCAAAAC CATATCGGTT ATAAAACGCT TGAGCTTTTG TATTATGCTC CCAAACACCT	23520
AGCCAAGCCC AAGAAAACT ATTTTGTGTA GCAAGTTCAA GTGCGAATTC AAACAGTTGC	23580
TTACCTAGTC CAAATCCTTG GAATTTTGT AGCACATAGA GACGTTGAAT TTCAAAAGCG	23640
TCCTCTAATT CTCTCTCAGT TTGAGCACTT CCCAGTTGA CTTTGAGAAA ACCAGCTATC	23700
TCCTCCTCAT GCATAATGAA ATAGGTTTCA GAGTCAGGAT TTCCCAACTC AGTTGACAAA	23760
GTTTTCAGAC TATAAGCCTC TTCAAAGTAT TCCTGTAAC TCTCTTCCGT ATTATCATAC	23820
GCAAAGGTTT CACGAAAGGT TTGTTTGGCA ATTTTAGCCA ACACCTCAAC ATCTGCCATT	23880
TCTACTTTTC TAATCATTAT TTAAACTGTT CTGAGAAGCG GACATCTCCT TGGTAGAATC	23940
CACGGATATC GTTGATTCCA TAACGGAGCA TAGCTACACG CTCTTGTTCCA AGACCAAAGG	24000
CAAAGCCAGA GTATACAGTC GCATCGATAC CACTCATTTT AAGGACACGT GGGTGAACCA	24060
TACCGGCCCC CATAATTTTC ATCCAACCTG TTTTCTTACA TACATTACAG CCTTCTCCAC	24120
CACACTTGAA GCAAGAAACA TCCACCTCAA CAGATGGCTC TGTGAATGGG AAGTAAGATG	24180
GACGCAAACG AATTGACGC TCTTCACCAA ACATTTTTTG GACAATCAAC TGAAGCGTTC	24240
CTTGAAGATC AGCCATAGAG ATATTTTTC CAACTACCAA GCCTTCGATT TGGTGAAT	24300
GGTGACTGTG GGTGCGATCG TCCGTATCGC GACGGAAGAC ACGCCCTGGC GAGATCATCT	24360
TCAAAGGACC TTTAGAAAAA TCATGGGCAT CCATAGCACG CGCCTGAACT GGAGACGTGT	24420
GGGTACGGAG CAAGATTTCT TCAGTGATAT AGAAAGTATC CTGCATATCA CGAGCTGGGT	24480
GGTCTTTTGG AAGGTTTATA CGTTCAAAGT TATAGTAGTC TTGCTCCACT TCAAAACCAT	24540
CCACGACTTG ATAACCCATA CCGATGAAGA TATCTTCGAT TTCTTCACTG GTTTGTGTCA	24600
AAACGTGACG GTGACCAGTC GCAACTGGAC GACCTGGAAG CGTCACATCT ATACTCTCGC	24660
TAGCCAGTTG AGCCGCGACT TTCTTTTCTT CCAAGAGCTT AGCTGTTTCT TCAAAAGCAG	24720
CAGTCAAGAC ATCAGGAGCT TCATTGACGT GTTTCCCGAT GATTGGACGC ATCTCAGCAG	24780
AAACATCTTT CATCCCTTTG AGGATTTTCA TGAGCGAACC CTTTTTACCA AGGACAGAGA	24840
CACGCAAATC TTGCATCTCT TTTTCATTTT CAGCAGTAAT CTGCTTCAAG CTAGCCAGCG	24900

954

TTTCTTCGCG	AAGCGCTTTT	AATTGTTCTT	CAATAGTTGA	CATATTTCCCT	CCATCAGTCT	24960
CTCGTAGATA	AAAAGAAAAC	CACATGCCAA	AAACTCCACT	CGGAGCGTTG	ACACGCGGTA	25020
CCATCCGTTT	TCATCTGACA	AGTCAGACCT	TCATTTCTAA	ATCCATGCGC	AAGTGAATTC	25080
ACCCAGCTTT	CATATAGAGA	GCTTGCAGTC	ACGGCTCTCC	TCCCTGATAT	ACTTCCCTTG	25140
GGCTACTAGT	CTTTCAGATT	CCTATTCAAT	TACTACTTAG	TTTATCAGAT	TTTTACCATT	25200
CTTGCAAGAC	CTATCTTACT	TCTGCTTGTT	AGCTTATTCT	TATCTAAATT	TATATAAACc	25260
TTATCTAAAT	TAACTATTTA	TAATTTTGT	AACAAAATTA	AATTAATTGA	CACTCCCCTA	25320
TAAATAAAG	AAGTTTAGAA	TTTAATGTCT	TCCAAACTTC	TTTATTCAT	ATTTAATGAA	25380
ATGCCACCTT	AACCGTGATA	ATAGCTAGTC	ATCAATAAAA	AACATTTTGA	ATAAGGATTC	25440
TCCATTGAT	TCAATCACCT	CTTATACCA	AGTAAAAGAC	ATTTTCTTAT	ATCGATTTAA	25500
TGTACCACTT	CCATCATCGT	TTGATCAAC	ATAAATGAGA	CCGTACCCTT	TAGAAAGTGT	25560
TGCAGTGGAC	ATAGAAACAC	AGTCAATACA	TCCCAAGAC	GTATAGCCCA	TAATTTCAAC	25620
ACCATCCTGT	AGAGCTTCAG	CAACTTGCAA	TAAATGTTCT	TTCATATACT	GAATTCTATA	25680
ATCATCTTGG	ACGGTTAAGT	TATTAAGTTC	ATCTTTTATT	AGTTGATCTT	TAGCACCTAA	25740
TCCATTTTCT	ACTATAAATA	ATGGGATTTG	ATAACGGTCA	TAATATCTAT	TTAAAATTAT	25800
ACGTAGTCCA	ATTGGATCAA	TTTGCCATCC	CCACTCTGAA	GACTCTAAAT	AAGGATTTAC	25860
TAAACCACCA	ATAATATTCC	CTTCTCCTGA	ATTATACTGT	GTTGGAAGAG	CAGATTGAGT	25920
CACACTCATG	TAATAGCTAA	AGGATAAAAA	ATCTACGGTA	TAATTTTTTA	ATAACTCTGC	25980
ATCTTCAGCT	GCAAACTCTA	TGTTAATGTC	ATTTTCCTTA	AAATATCTTT	TTGCATAATT	26040
CGGATAATAA	CCTCTAACAT	GCACATCTGA	AAATAGATAA	TTTAGATTCT	CATACTCATG	26100
AGTCGCCCCAT	ACATCTTTTG	GATTTGGAGT	CATTGGATAA	GCTGGCATAG	CTAATACCAT	26160
ACATCCCACC	TTAAACTCTG	AATTAATCTC	ACGAGCAATT	TTTGTAACCA	AACTTGAGGC	26220
GACTAATTCA	TGATGTATAG	CTTGATATAA	TTCTTGTTTC	GAAAGATTCT	CCTTAGGTAT	26280
ATCTATTCCT	CCACTAGTAA	ATGGTAATTC	CAAAACAGAG	TTTACTTCGT	TAAATGTAAG	26340
CCAATATTTA	ACTTTATCTT	TATACCTTTC	TAAAACGTG	CGAGCAAATT	TTTCATAAAA	26400
ATGAATCATT	CTCCTATCAA	CCCATCCATG	ATATTTTCTT	GCTAAATATA	ATGGAGTCTC	26460
ATAGTGTGAA	AGAGTTACAA	GTGGTTCTAT	CCCGTGAGCA	TGTAGTTCAT	CAAACAATTC	26520
ATCATAATAT	TTCAACCCAG	CTTCGTTAGG	TTCTTCCTCA	TCTCCTTTTG	GAAAAATTCT	26580
ACTCCATGCA	ATAGAAGTAC	GAAAAACATT	AAAGCCCATT	TCAGAAAACA	AGGATATATC	26640
TTCCCTTATAT	TTATGATAAA	AATCAATACC	TATCAATTTT	AAGTTATCTT	CTGTAGGATT	26700

955

TTCTGTTGCT TCTCCTAATC CACCTTTGGG TAACACATCC TGAAGTATA AGCCCTTACC	26760
ATCTTCATTA TATGCTCCCT CTACTTGATT AGCTGCAACA GCTCCACCCC AAAGAAAATC	26820
ATCTGGAAAA ATGGTCATAA CTTTCCTCCA TTATAATATT ACCAGTAATT CCTTAGAATG	26880
CTCGATTGTC TGATTATTAG GTAATACTAA TACATCTAGA AAATCATTGG TATTCCTTAC	26940
AATTACTGGT GTAAGTGTTC CGTAGCCTTT AGTCTTGATT AAATCAAGT CCATTTCAAA	27000
AATCAACTGA TTTTGGAAAA CTCTGTCTCC TTCTTCTACA TGAATAATA AACCTTGACC	27060
TTTTAGCTCA ACAGTATCTA ATCCAATATG AATTAGTAAC TCAACACCCT CATCACTCTT	27120
CAATCCAATT GCGTGCTTAG TCGGAAAAAT ATTTGTAATT TTCCCATCAA ATGGTGCATA	27180
AACCTTACCT TCACTGGGGA TAATCGCTAC TCCGTCTCCA ATTAGTTTAT CTGAAAAATG	27240
TTTATCCTGG ACATCGCTTA ACGGAATGAT TTCTCCTGAT ATAGGAGAAA ATATCATTTT	27300
TTTATTTGAA ACTCCAGCTT CAACTTCTAA ATTGCTAGAA CTCTCTTCTT CATCGATTCC	27360
AAATATATAA GCTAATACAA AGGTAATAAC AACCAGAAATG ACCGCCACAA TTAAAGCATT	27420
TACAATATTT GATGGCACAT CAGAATAAAT AAATTGAGGC AACGCTATCA AAGATGGGAC	27480
AGCAAATAGA TATGCTTTAA CACTAGTAAG ACCTGCAAAT AATCCCGCTA ATCCACCACC	27540
AATCATAGCT GCATAAAGCG GTTTTTTATA TTTTAAAGTC ACACCATATA ATGCAGGTTT	27600
GGTAATCCCT GCAAGTAAGG CTGAGAAACC TGCTGCAAAA GCAATTGTGT TTGTATTATT	27660
ATTTTTACTC TTTAATGCAA CAGCCATCGA AGCAGCCCTT TGAGCTAAGT TTGACCCTAA	27720
CATTGCTGGA AGAATTAATA CGTCTGGAGT AGCAATAGAT GCCGCCAAAA AAATAGGTGC	27780
AAAAGCCCAA TGCAATCCAG TCATAACAAT AAATGGCATA ATAGCACCAA GAATAGCTAA	27840
TGTAAGCCAT CCAGCTACAC CATACATTTG CCCAACTAGA TTTGATAATC CTTACCAAC	27900
AATTACTCCA ATAGGTCCGA CTACAATAA GGCAATACAG CTTGATACTA ATAATACTAG	27960
CGTAGGTTGC AAAAACTCT TAGTAATAGC TAGTGTTAAT TTAGCAATTA TTTTTCAT	28020
ATATTTTCATC AACCAAACCA TAATAAGAAT TGGAACGACT GATGAACCAT AACTAGCTGG	28080
TGTCACAGGT GCACCAAATA AACTAAGAGG ATTCCCTGAT TGCACCATTG GAACAAAATT	28140
TGGATGGAGA AGTACACCTG CTACAGACAT AGCTAATGTA GATGTTACTT TTAATTTTGG	28200
TGATGCAGAA TAAGCTAATA ACAGCGGTAA GAAATAATAT GGAGCATCCC CAAAAATGT	28260
CAAAAAAGCA ATAGTCTGAG AATCTGATTG CAATATACCA AGCATTGGTA AAATGATTAC	28320
CAAGACTTTC AACATACCTC CCCCTAACAT TGCTGGAATG ATTGGAGTCA TGGAACCCAGC	28380
GATATACTCA ATGATTCTTT CTAAAATATT CCCTTTGTGC CCTTGAACAA CTGAATCGGA	28440

956

TTCAAAATTG CCAAGTTTAA CGAATTCCTT ATAATAATTA GCTACATCAT TACCAAGTAT	28500
AATTTGATAT TGTCATTCT TTTTCATAAT ACCTATTACA CCTGGTATCT TCTTCACATC	28560
ATCATCATTG ACTAAATTTT CATCTTTTAA TTCTAATCTT AAACGTGTTA CACAATGGGT	28620
AACTCTATTG ACATTTTTTT CACCTCCAAT TACATCGAGG ATTTTTTGTA CCGTATCTTT	28680
ATAACTCATG GTATTCTCCT ATTCTATTAA TCTAAATTTT TTGTTAAGCG ACGAATATGA	28740
GCCATCAAAT AACTAATTC ACTAGAAGTC AGCAAATAAT TGTACTCCGT TTGTATAAAC	28800
ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATATT TATTTTTCAT TAATGCTAAC	28860
AAGTCTTCAT CATCATCGTC GG	28882

(2) INFORMATION FOR SEQ ID NO: 141:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12835 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

GCCTATGTCT TTTTCAAAAA AATGCTTGAC TTGAGACGGG AACTAGGGAA GTCTAAAGGC	60
GGAAGGCATT GATTTATACT CTTGAAAAAT CTCTTCAAAC CACGTCAACG TCGCCTTGGA	120
TTATATATGT AACTGACTTC GTCGATGCTT ATCTACAACC TCAAAGCAGT GCTTTGAGCA	180
ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATTATA TTACTTTCTA	240
TTGTAGGAG GTGGCTTATG AAGATTCCTC TCTTAACTTT TGCAAGGCAT AAATTTGTTT	300
ATGTCTTGCT TACTTTGCTT TTTCTTGCTT TGGTTTATCG TGATGTTTG ATGACTTATT	360
TCTTTTTTGA TATTCATGCG CCCGATCTAG CTAAATTCGA TGGACAAGCA ATTAATAATG	420
ACTTATTAAA ATCAGCATTA GATTTTCGTA TTCTCCAGTT CAATCTAGGT TTTTATCAAT	480
CATTATATAT TCCAATCATC ATTGTTTTCG TAGGTTTTC AATATATTGAG CTGAAAAATA	540
AAGTTTACG ATTGAGTATT GGAAGAGAAG TGAGTTATCA AGGGTTAAAA AGAAAGTTGA	600
CTTGCAAGT TGCAAGTATC CCTGTGTTGA TATATTTAGT GACTGTGCTG ATAATTGCAA	660
TTATAACCTA TTTCTTTGGG ACTTTTCTC CTCTTGATG GAATCTCTA TTTCTGATG	720
GAAGTGGTTT ACAAAGACTC CTAGATGGAG AGATAAAAAG CTATTTGTTC TTTACTTGTC	780
TCCTACTAAT CGGTATTTTC ATCAATGCAA TCTATTTTTT ACAAATAGTT GATTATGTGG	840
GGAATGTGAC TCGTTCGGCA ATCACCTATT TGATGTTTCT TTGGCTTGGT TCTATGCTGC	900
TTTATAGTGC CTTGCCTTAC TATATGGTTC CTATGACGAG TTTGATGCAA GCTAGCTATG	960

957

GGGATGTAAG TTTGATGAAA CTCTTTACTC CTTATATCCT TTATATTGTC CCTTACATGG	1020
TGCTTGAAAA ATATGAAGAT AATGTTTAAAG AATTTTAAACA ATATTTTGCT AAATAGAAAAG	1080
ATTGTTTTTAC TACTTCGTAT AGTTCTGATG ATGATTTTGA TAAACCATCT ATTGTCAACA	1140
GCGGTTCAAA AGCAGGATGC TGTATCTTT TTCAAGAGAG AATTGATTTC AATTTTTTCC	1200
TATAATGACT ATTCTGAAGC GAATTTAGAA ATCCCCAAAC TATTGTTAAA CCTTTCGCTT	1260
TTTCATGGTAG GATGGCTCTC TGTCATTTTA CTTGAAAGTG ATTTGGCAGA CCATTACCAT	1320
CACTTGATTG GCTATCAATC AAGCTCCTTT TTCGATTATA CAAGGAAACG ATTGGTTGTC	1380
ATTTCTAAAT TTTTACTCA AGATTTGTTT GTCTGGTTTC TTGGTTTACT TCCTCTAGGA	1440
ATTCATTTCA AAACAGTCGC ACTTTTCTTT TTAATTGCTC AGTTAATGAT GTTGTACTTA	1500
CTACTGTCTT ATCTGATAGC ACTGATTAGT GCGGGCGCTG GTTTTTCCTT TTTTCTCTAT	1560
TTTTTAGCAT TTGTGGGACA AGAATGGATG ATGGATCATA TTGTAACAGT GTATTAGTA	1620
CTCTTAAGTT TATTAGTTAT GTTGATTGTT AGTCGCTTGG AAGAGAAATT TAAGAAAGGA	1680
TAAACGATGA GACTTGAAAT TATAAATGGA CAGAAAATTT ATGGGAAAAG ACCTATTTTA	1740
AATCAGTTGA ATTTGGTGT TCAATCAGGA AAAATTTATG GACTTAAAGG TGATAATGGA	1800
TCTGGCAAGA CGGTTCCTTT AAAGATACTT GCTGGTTATA TTAAGCTTGA CAAAGGAAAA	1860
GTCTTCAAG ATGGTAAAGT TTACGGGGTA AAAAATCATT ATATTCAGGA TGCAGGAATT	1920
TTAATTGAAA AAGTCGAGTT TTTATCTCAT TTATCCCTGA GAGAAAATTT GGAAGTGTTA	1980
AGGTATTTTT CATCTAAAGT TACGGAAAAA AGAATTGCCT ATTGGATTCA ATACTATGAT	2040
TTACAGGAAT TTGAAGACAT TGAATACCGT CATTTATCCT TAGGAACAAA GCAAAAAATG	2100
GCCTTGATTG AAGCCTTTAT TTCCTCTCCT TCTATACTCT TTCTCGATGA ACCTATGAAT	2160
GCTTTGGATG AGAAGAGTGT GAGGTTAACC AAACAGGTCA TTTTATCTTA CTGAAAAAA	2220
GAAAAATGGTC TGGTTATCCT GACGTCGCAC ATATCGGAAG ATATTTTACA CCTTTGTACA	2280
GATGTATTAG TTGTCGAAAA TGGACATATA CAAATGTAAA GGATATACAA TCCTAGGAGA	2340
TGGCTTATGG CACATCTAAA ATCATTATTT ACACGATATT CCAAGGTTTA TATTGGTTTA	2400
GTTCTGCTGA TCTGGCTGTC TTTCTTCTTT ATCCCTTGGG ATAAACCACT TCTGGGGATA	2460
AGGATTGACA TCTTCATCAT ACAGAAAATC TTGCTAGCTT TTGGAATTCT GTCCATTCTC	2520
ATGGCCTTGC TGTCCAAGAA AGTCAGTCTC TTTGTMTTGT GACTGATTTG CTGTCTTTCT	2580
CTTTGGATTA ACTTATTTAT CACATTGACC ATTTTGCGGA TTTTGGCAA TTAAACAGTC	2640
ATAAAAGTCG GAGAGGTTAG CTTGAAAACT AACCTCTTTT TCCTTTTCAA AATGGGGATT	2700

958

CTTCCTTGAA AATAATCAGT AATTGTGCTA AAATTAAAGG AACATTCTAA AATATTCGGA	2760
ATTTAAAGTA AGGAAAAACA TGGCTAATAT TTAAAAACA ATTATCGAAA ATGATAAAGG	2820
AGAAATCCGT CGTCTGGAAA AGATGGCTGA CAAGGTTTTC AAATACGAAG ACCAAATGGC	2880
TGCTTTGACT GACGACCAAC TAAAAGCAAA AACAGTTGAA TTTAAGGAAC GTTATCAAAA	2940
TGGAGAATCA CTGGATTCAT TGCTTTACGA AGCATTTCGG GTTGTCCGTG AAGGTGCCAA	3000
ACGTGTCCTA GGTCTCTTCC CTTATAAGGT TCAGGTCATG GGGGGGATTG TTCTTCACCA	3060
TGGTGACGTG CCAGAGATGC GTACAGGGGA AGGGAACC TTGACTGCGA CCATGCCGGT	3120
ATACCTCAAT GCCCTTTCAG GTAAAGGGT TCACGTAGTT ACGGTTAATG AATACCTGTC	3180
AGAACGTGAC GCGACTGAGA TGGGTGAATT GTACTCTGG CTTGGTTTGT CAGTAGGGAT	3240
TAACTTGGCT ACCAAATCTC CAATGGAGAA AAAAGAAGCC TATGAGTGTG ATATTACTTA	3300
CTCAACTAAC TCAGAAATCG GATTGACTA CCTTCGTGAC AACATGGTCG TTCGCGCCGA	3360
AAACATGGTA CAACGTCCGC TTAATATGC CTTGGTCGAT GAGGTTGACT CTATCTTGAT	3420
TGACGAGGCT CGTACACCTT TGATTGTATC AGGTGCCAAT GCGGTTGAAA CCAGTCAGTT	3480
GTATCACATG GCAGACCACT ATGTAAAAATC TTTGAACAAA GATGACTACA TCATCGATGT	3540
GCAGTCTAAG ACTATTGGTT TGTCTGATTC AGGGATTGAC AGGGCTGAAA GCTACTTCAA	3600
ACTTGAAAAC CTCTATGACA TCGAAAACGT GGCTTTGACT CACTTTATCG ATAACGCCCT	3660
TCGTGCCAAC TACATCATGC TTCTCGATAT TGAATATGTG GTGAGCGAAG AGCAAGAAAT	3720
CTTGATTGTC GACCAATTTA CAGGTCGTAC CATGGAAGGT CGTCGTTATT CTGATGGATT	3780
GCACCAAGCT ATTGAAGCCA AAGAAGGTGT GCCAATCCAG GATGAAACCA AGACATCTGC	3840
CTCAATCAGC TACCAAAACC TCTTCCGTAT GTACAAGAAA TTGTCTGGTA TGACGGGTAC	3900
AGGTAAGACT GAGGAAGAAG AATTCGGTGA AATCTACAAC ATTCGTGTTA TTCCAATCCC	3960
AACAAACCGT CCTGTTCAAC GTATTGACCA CTCAGACCTT CTTTATGCAA GTATCGAATC	4020
TAAGTTTAAA GCGGTGTGCG AAGACGTTAA GGCTCGTTAC CAAAAGGGTC AACCTGTCTT	4080
GGTTGGTACA GTAGCGGTG AACTAGTGA CTACATTTCT AAGAAATTGG TTGCAGCTGG	4140
TGTTCTCTAC GAAGTCTTGA ATGCCAAAAA CCACTATAGA GAAGCCCAA TCATCATGAA	4200
TGCTGGTCAA CGTGGTGCCG TTACCATCGC AACCAACATG GCGGGTCGTG GTACCGACAT	4260
CAAGCTTGGT GAAGGTGTTT GTGAACCTGG AGGACTTTGT GTTATTGGTA CAGAACGTCA	4320
TGAAAGTCGT CGTATCGATA ACCAGCTTCG TGGACGTTCA GGTCTCAAG GAGATCCAGG	4380
TGAGTCACAA TTCTACCTAT CTCTGAAGA TGATTGTATG AAACGTTTGG GTTCTGAACG	4440
CTTGAAGGGA ATCTTTGAAC GCTTGAACAT GTCTGAAGAG GCCATTGAGT CTCGCATGTT	4500

959

GACGCGTCAG GTTGAAGCAG CTCAGAAACG TGTCGAAGGA AATAACTACG ATACCCGTAA	4560
ACAAGTCCTT CAATACGATG ATGTCATGCG TGAACAACGT GAGATTATCT ATGCTCAACG	4620
TTACGATGTC ATCACTGCAG ATCGTGA CTG GGCACCTGAA ATTCACTCTA TGATCAAACG	4680
CACGATTGAA CGTGTCTTG ATGGTCATGC GCGTGCCAAA CAAGATGAAA AACTAGAGGC	4740
AATTTTGAAC TTGCTAAGT ACAACTTGCT TCCTGAAGAT TCTATTACGA TGAAGACTT	4800
GTCAGGCTTG TCTGATAAGG CCATCAAGGA AGAGCTTTTC CAACGTTCTT TGAAGGTTTA	4860
CGATAGTCAG GTTTCAAAAC TACGCGATGA AGAAGCAGTT AAAGAATTCC AAAAAAGTTT	4920
GATTCTACGA GTGGTGGATA ACAAGTGGAC AGATCATATC GATGCCCTTG ATCAATTGCG	4980
TAACGCGGTT GGACTTCGTG GCTATGCTCA GAACAACCCT GTTGTGAGT ATCAGGCAGA	5040
AGGTTTCCGT ATGTTTAATG ATATGATTGG TTCGATTGAG TTTGATGTGA CACGCTTGAT	5100
GATGAAAGCA CAAATTCATG AACAAGAAAG ACCACAGGCA GAACGTCATA TCAGTACAAC	5160
AGCGACTCGC AATATCGCTG CTCACCAAGC AAGTATGCCA GAAGATTGG ATTTGAGCCA	5220
GATTGGACGC AATGAAC TTT GCCCATGTGG TTCTGGTAAG AAATTTAAAA ACTGTCACGG	5280
TAAAAGACAA TAAAATGAGA TAGTTTAGAG GCGGATATCT TGTGAAAAGT AAATTTTAC	5340
TGGGTATCCG TTTGCTTTAT AAGGAGATGA GTTATGGTAT TTACAGCAA AAGCTCTAAA	5400
ATAAATATAG AAGAAGTTCG TGCCTTGTC AATTAGAAG GTCAGGCTTT GGAGAGGAAA	5460
TCACAGCGAG ATCAAGAGCT AGAAGCCATT ATACGTGGAG AAGACCAGCG AATCTCTTG	5520
GTAATCGGGC CATGCTCATC TGACAACGAA GAAGCTGTCC TTGAATACGC TAAGCGTTTG	5580
GCAGTCTTAC AAGAAGAAGT GGCAGATCGT ATCTTTATGG TTATGCGTGT TTATACTGCC	5640
AAACCCCGTA CCAACGGAGA TGGCTATAAG GGCTTGATTC ACCAGCCTAA CGCGACAGAA	5700
GCGCCTAGTC TTATCAATGG AATCAAAGCC GTTCGCCATC TTCACTATCG TGTCATCACA	5760
GAAACAGGGA TGACAACTGC TGATGAAATG CTTTATCCTG AAAACCTTCC GCTTGATAGT	5820
GATTTGATTT CTTACATGGC AGTTGGTGCC CGTTCAGTTG AAGACCAGCA ACACCGCTTT	5880
GTGGCAAGTG GGGCAGGATT TTCTACTGGT TTTAAAAATC CAACCTCTGG AAATCTCAAT	5940
GTCATGTTTA ATGGGATTTA TGCTGCTCAA AACAAACAAA GTTTCCTTTT CTTAGGAAAA	6000
GAAGTAGAAA CAACTGGGAA CCCGCTTTCA CACGCTATTC TTCGTGGTGC TCTTAATGAG	6060
TATGGAAAAA ATATTCCTCA CTAATATTAT GACAATTTAA TTGATACCAT TGCCCACTAT	6120
GAGAAAATGG GCTTGGAAAA TCCTTTTATC ATCATTGATA CCAATCATGA CAATCTGGT	6180
AAGCAGTATA TTGAACAGAT CCGAATTGTC CGCCAGACCT TGATTAAACG TGCTTGAAT	6240

960

GAAAAAATTA AGCAGTTCCT TCGTGGTTTT ATGATTGAGT CTTATCTGGA AGATGGTCCA	6300
CAAAATGAGC CAGAAGTATT TGGTAAGTCT ATCACAGACC CTTGCCTGGG TTGGGATAAC	6360
ACAGAAGCTC TTGTCAGAGA AATTTACAAA ACGTTAGGAG AATAAGATGG CATTATTGTA	6420
AAAAGGTCAA GAAATCGATA TGGAAATCAT CAAGGCTGAA ACCCAATTGT CTGCGGAAGC	6480
CTTGAGACTC AAGGAAAGCC GTGACAGGGA ATTGGCAGAT ATTATTTCAG GGAAGATGA	6540
CCGTATTCTC TTGGTGATTG GTCCTTGCTC TTCTGATAAT GAAGAGGCGG TCTTGGAATA	6600
TGCTCGCCGT TTATCTGCCT TGCAAAAGAA GGTAGCGGAT AAGATTTTCA TGGTCATGCG	6660
CGTGTATACT GCTAAGCCTC GTACCAATGG AGACGGCTAT AAAGGATTAG TTCACCAGCC	6720
AGATACTTCT AAGGCTCCAA GCCTGATTAA TGGCTTGACG GCTGTGCGCC AGTTGCACTA	6780
CCGCGTGATT ACAGAGACTG GTTTGACAAC GGCAGATGAG ATGCTTTATC CGTCAAATCT	6840
GATCTTGGTG GATGACTTGG TCAGCTACCA TGCCGTTGGA GCTCGTTCTG TGAAGACCA	6900
AGAGCACCGC TTTGTGGCTT CTGGGATTGA TGCACCAGTA GGGATGAAAA ATCCAACCTC	6960
AGGAAATTTG GGTGTTATGT TTAACGCCAT CTATGCTGCT CAAAACAAGC AAACCTTCCT	7020
TTATCATGGG CAGGAAGTTG AGACATCAGG TAATCCTTTG GCCCATGTTA TCCTCCGTGG	7080
AGCAGTCAAC GAGTATGGCA ATTATATGCC GAATTACTAC TATGAAAATC TACTCCAAGC	7140
CATTGAACGC TATGAAACCA TGGGACTTGA AAATCCTTTT ATCCTCATTG ACACCAACCA	7200
TGATAACTCA GGCAAGCAAT ATATGGAGCA GATTGCAATT GTTCGCCAGA CCTTGCAGAA	7260
TCGTGATTGG AATGAGAAAA TTA AAAAGAC GGTTCGAGGA TTTATGATTG AATCTTACCT	7320
AGCAGATGGT CGTCAAAACC AACCAGAGAT CTTTGGTTGC TCTATTACTG ACCCTTGCCT	7380
AGGTTGGGAA AATACAGAGG CCTTGGTAGA AGAGATTAT GTTACCTTGA CAAAATAAGT	7440
GAAAAGGATG GAGTTGGGGA ATCTCAACTC CTTTGTATGA GAATGATAGT TGGACACGGA	7500
ATTGACATCG AAGAATTGGC TTCGATAGAA AGCGCAGTTA CACGACATGA AGGATTTGCT	7560
AAGCGTGAC TGACCGCTCA GGAAATGGAG CGCTTCACCA GTCTCAAAGG ACGCAGGCAA	7620
ATAGAATATT TAGCTGGTCG CTGGTCGGCT AAGGAGGCCT TTTCCAAGGC TATGGGAACG	7680
GGCATTAGCA AGCTCGGTTT TCAGGATTTG GAAGTCTTGA ACAATGAACG TGGGGCGCCT	7740
TATTTTAGTC AGGCACCATT TTCAGGAAAG ATTTGGCTGT CTATCAGCCA CACCGATCAG	7800
TTTGTGACAG CCAGTGTCAT TTTGGAGGAA AATCATGAAA GCTAGTCCAC ATAGACCAAC	7860
CAAGGCTCTG ATTCATCTGG GAGCTATTTCG ACAAATATT CAGCAAATGG GGGCTCATAT	7920
CCCTCAAGGA ACGCTCAAGT TGGCTGTGGT TAAGGCCAAT GCTTATGGTC ATGGAGCTGT	7980
TGCCGTTGCC AAGGCAATTC AAGATGATGT TGATGGCTTT TGCCTTTCCA ATATCGATGA	8040

961

AGCCATTGAA CTCAGACAAG CTGGACTCAG CAAGCCAATC CTCATTTTAG GAGTTTCTGA	8100
AATCGAAGCT GTTGCTCTAG CTAAGAATA TGACTTCACC TTGACAGTGG CTGGACTGGA	8160
GTGGATTCAA GCACTCTTAG ATAAGGAAGT GGACCTAACT GGATTGACAG TCCACCTCAA	8220
GATTGATTCA GGGATGGGAC GGATTGGTTT TAGAGAGGCA AGTGAGGTTG AGCAGGCTCA	8280
AGATTTGCTC CAACAACACG GTGTTTGTGT TGAAGGAATC TTTACCCACT TTGCTACTGC	8340
TGATGAGGAA TCAGATGACT ATTTTAATGC CCAGTTAGAA CGGTTTAAAA CTATTTTAGC	8400
TAGTATGAAG GAAGTTCCAG AGCTGGTTCA TGCTAGCAAT TCTGCAACGA CTCTTTGGCA	8460
TGTAGAGACT ATTTTCAATG CGGTTCTGAT GGGAGATGCC ATGTATGGCC TCAATCCAAG	8520
TGGAGCGGTC TTGGATTGTC CTTATGATTT GATACCGGCC TTGACCTTGG AGTCTGCTCT	8580
GGTTCATGTC AAGACAGTTC CAGCTGGAGC TTGCATGGGC TATGGAGCAA CTTATCAAGC	8640
GGATAGCGAG CAAGTCATCG CGACCGTGCC AATCGGGTAT GCAGATGGAT GGACAAGAGA	8700
CATGCAAAAT TTCTCTGTCT TGGTAGATGG CCAAGCTTGC CCAATTGTCG GCAGGGTTTC	8760
GATGGACCAA ATCACTATTC GATTGCCTAA GCTTTATCCG CTAGGAACCA AGGTAACCTT	8820
GATTGGCTCC AATGGGGATA AGGAAATCAC TGCAACTCAG GTAGCGACCT ACCGCGTAAC	8880
CATTAATAT GAGGTGGTTT GCCTCCTCAG CGACCGTATT CCGAGAGAAT ATTATTAGAA	8940
AAGAAAGGAG TGGAGCATGA ATCTACATCA ACCCTTGCAT GTCCTGCCCTG GTGTGGGACC	9000
AAAGTCAGCA GAAAAATACG CCAAAGTAGG AATTGAAAAC TTGCAAGATC TCTTGCTCTA	9060
CTTTCCTTTC CGTTATGAAG ACTTCAAAAC CAAGCAGGTG CTGGAGCTGG AAGACGGTGA	9120
GAAGGCAGTT CTTTCTGGTC AGGTAGTGAC TCCTGCTAGT GTCCAGTATT ATGGTTTCAA	9180
GCGCAATCGC CTGCGTTTTA GTCTCAAGCA GGGAGAGGTC GTTTTTGCGG TGAATTTCTT	9240
TAACCAGCCC TATCTGGCTG ATAAATAGA GTTGGGAGCA ACCCTTGCTG TCTTTGGAAA	9300
ATGGGACCGC GCTAAGGCTA GTCTGACTGG GATGAAGGTT CTGGCTCAGG TAGAAGATGA	9360
CCTCCAGCCT GTCTATCGTC TGGCTCAGG AATCAGTCAG GCCAGTCTGG TCAAGGTCAT	9420
CAAGACGGCT TTTGATCAGG GACTGGACCT CTTGATAGAA GAAAATCTGC CCCAGTCTTT	9480
ACTAGACAAA TACAACTCA TGTCCCGTTG TCAGGCAGTC CGTGCTATGC ATTTTCCAAA	9540
GTATTTGGCA GAATACAAGC AGGCTCTTCG CCGTATAAAG TTTGAGGAAC TCTTTTATTT	9600
CCAAATGCAG CTGCAGATGC TCAAGTCTGA AAATAGAGTT CAGGGAAGTG GTCTGGTTCT	9660
GAATTGGTCT CAGGAAAAAG TGACAGCAGT TAAAGTAAAT CTTCTTTTTC CCCTGACCCA	9720
AGCTCAGGAA AAGAGTTTGC AGGAAATTTT AACTGATATG AAGTCCGACC ACCACATGAA	9780

962

TCGTCTCCTA CAAGGGGATG TGGGGAGTGG AAAAACGGTA GTCGCTGGCT TGGCCATGTT	9840
TGCGGCAGTG ACAGCAGGTT ATCAGGCTGC CCTAATGGTA CCAACAGAAA TCCTCGCAGA	9900
GCAACACTTT GAGAGTTTAC AGAACCTTTT TCCCAATTG AACTGGCTC TCTTGACAGG	9960
TTCTTGAAA GCTGCAGAAA AGAGAGAAAT CTTGGAGACC ATTGCCAAGG GTGAGGCTGA	10020
TTTGATTATA GGAACACAG CTCTGATACA AGATGGGGTG GAGTATGCTC GTCTTGGTTT	10080
GATTATTATC GATGAGCAGC ACCGTTTGG TGTAGGGCAA AGGCGTATTT TACGGGAAAA	10140
AGGTGACAAT CCAGATGTCC TCATGATGAC GCGACTCCC ATTCCACGGA CGCTTGCCAT	10200
CACAGCCTTT GGAGATATGG ATGTTTCCAT TATCGACCAG ATGCCAGCAG GTCGGAAGCC	10260
TATTGTGACG CGCTGGATCA AACATGAGCA ACTACCTCAG GTCTTGACTT GGTAGAGGG	10320
GGAAATTCAA AAAGGTTCCC AAGTCTATGT CATCTCTCCT TTGATTGAAG AATCAGAAGC	10380
TCTAGATTTG AAAAATGCCA TTGCCTTATC AGAGGAGTTG ACGACTCATT TTGCAGGCAA	10440
GGCAGAGGTG GCTCTTCTAC ATGGTAGGAT GAAGAGTGAC GAAAAAGACC AGATCATGCA	10500
GGATTTCAAG GAGAGAAAGA CGGATATTCT GGTTCGACG ACGGTTATTG AGGTTGGGGT	10560
CAACGTTCCC AATGCGACTG TCATGATTAT CATGGATGCC GATCGCTTCG GTCTCAGTCA	10620
ACTTCACCAG CTTAGAGGTC GTGTCGGTCG GGGGGACAAG CAGTCTACG CTGTTCTCGT	10680
TGCTAATCCC AAGACGGATT CTGGGAAAGA CCGCATGCGT ATCATGACAG AAACGACCAA	10740
TGGATTMTGC CTTGCGGAGG AAGATTTGAA AATGCGTGGT TCTGGTGAGA TTTTGGAAAC	10800
CAGACAGTCA GGAATTCCAG AGTTCCAAGT GGCTGATATT ATCGAAGATT TTCCGATTTT	10860
AGAAGAAGCA AGAAAGGTTG CTAGCTACAT TAGTTCTATA GAAGCTTGGC AAGAAGATCC	10920
AGAGTGGCGC ATGATTGCCC TTCATCTGGA AAAGAAAGAA CATCTGGATT AAGCTTTCTC	10980
TAAGGAAAAC TTATACTCAA TGAAAATCAA AGAGCAAACT AGGAAGCTAA CCGCAGGTTG	11040
CTCAAAACAC TGTMTTGAGG TTGTGGATGA AACTGACGAA GTCAGCTCAA AACACCGTTT	11100
TGAGGTGGCA GATAGAATG ACGAAGTCAG TAACATATAT ATACGGTAAG GCGACGCTGA	11160
CGTGGTTTGA AGAGATTTTC GAAGAGTATT AAGCTAGTTT TTAGGTTTGG CTCTTATACT	11220
AGAGTCATCA AAAAGAAACG AGGACTCTCA TATGACAGTA ACGATTAAAG TAAATTACCA	11280
AACCACTTTC CAAAAGAAGG AAGCAAAAAA CTAGTATAAA CAGAAGAGAG AGCGAAATGC	11340
TCTTTTTCG TTTCTAAAAC TACTTTCAGC CCATCATCCT AAAAGTAAAG AATCTAAATT	11400
CACTTTCTAT TTACCCTTCT TTCTTGCAAT GATTACATAG ATATGCTACA GTTGTGGTAA	11460
CGATTACAAA ATAAAAGGAG CATGCTATGA AAAATCCAGC TTTGCTAGAA GAAATTAAGA	11520
CCTATAGAGG AAGGGATGAG GTTCCGAAG ACTTTGATGA TTTCTGGGAT GGGGAAGTGA	11580

963

AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAAG AGATTTCCAC ATTCCTCAAG	11640
TCAAGTGCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG	11700
TTCTTCCAAA GAGTGAGGAG AAGGTCCCAT TAATCTTCCA TTTTCATGGT TATATGGGAC	11760
GTGGCTGGGA CTGGGCCGAC ATGCTGGGCT TCACCGTAGC TGGTTACGGT GTTGTTCCTA	11820
TGGATGTGCG GGGCCAGTCA GGTACTCAC AAGACGGCTT GCGTTCCTCT TTAGGAAATA	11880
CCGTGAAGGG GCATATTATC CGTGGTGCTG TGGAAAGGTCG GGACCACCTC TTTTATAAGG	11940
ATGTTTATCT GGATATTTAC CAGTTGGTCG AAATTGTTGC TAGTCTGTCT CAGGTTGATG	12000
AGAAGCGTCT TTCTAGCTAT GGTGCCTCAC AAGGAGGGGC TCTAGCTCTA GTTGACGACG	12060
CGCTCAATCC TCGAATTCAG AAAACAGTTG CCATTTATCC CTTCTTGTCA GACTTCAGAC	12120
GGGTGATTGA GATTGGTAAT ACTAGCGAGG CTTACGACGA ACTTTTCCGT TATTTCAAGT	12180
TTACAGACCC CTTCCATGAA ACAGAGGAGG AAATCATGGC GACCCCTGCC TATATCGATG	12240
TCAAAAATCT TGCCCATCGT ATCCAAGGTG AGGTTAAGAT GATTACGGGC TTGGACGACG	12300
ATGTTTGCTA TCCCATTACC CAGTTTGCGA TTTATAATCG TCTGACCTGC GATAAAACCT	12360
ATCGCATCAT GCCTGAGTAT GCTCACGAAG CCATGAATGT ATTTGTCAAT GACCAAGTCT	12420
ACAACCTGGCT CTGTGGAAGT GAGATTCCTT TTAAATATCT AAAATAAGGA GTCGACTCTA	12480
AGCACAAAAT CTTAAAAATT ACAAACACGC ATAGTATCAG GGGATTAAAG AAACCTTTATA	12540
CTATGCGTTT TATCATGGAA ATATAGTAAA ATGAAATAAG AACAGGACAA ATCGATCAGG	12600
ACAGTCAAAT CGATTTCTAA CAATGTTTGA GAAACAAATG TGTACTATTG TAGTGTCAAT	12660
CTATTATATT TATAGAATTT TTTGTGCTA GATTGTCAA ATTGCTTAAA ATAATTTTTT	12720
TCAGAAAGCA AAAGCCGATA CCTATCGAGT AGGGTAGTTC TTGCTATCGT CAGGCTTGTC	12780
TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAAACCACG TCAGCTTCGC CTTGC	12835

(2) INFORMATION FOR SEQ ID NO: 142:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5020 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGGATATGA AGAACAAAAG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC	60
ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT	120

964

ACTTTGTATG GTATTGGCTT GTTAGCTCTC ATCGGACTTG CTAGAAATTT TGGAGAGGCT	180
GGTCAAAATC TTGCAAGCTA CTTGCAGACC TTGCATCAGA GCTTGACGGA TAAAACAAGT	240
GACTTTCGTT TAATTTTAGG ATTAAGTGGC TTTGGTTATT CTTAACACTG TGTTTCAGATG	300
GACAAGAAAA GTTGAGAAAA GACCTATTTC AACCTTGGGA TTTTATAGAG AGAATTTTCCT	360
CAGCAATCTT CTGAAAGGAT TTAGTCTAGG CCTGGCACTT TTTCTTCTGA CCTGTGTTAGG	420
TTTAGTGGTC TTAGGTCAAT ATCGTTTGA ATCCATTAC TTGAATCCTT ATTCTCTTGC	480
CTTTGTGCTC TTTACTATCC CATTTTGGAT TTTACAGGGG ACAGCAGAAG AAGTGGTGGC	540
CCGTGCTTGG CTACTTCCTC AATTGGCCTC AAGAACCAAT CTAAACTAG CTATTCTTAT	600
ATCTAGCCTG TTCTTTACCC TGCTTCATAT GGGCAATTCT GGTCTCACCC CTCTATCTCT	660
AGTAAATCTC TTTTATTTCG GAGTTGCCAT GGCTCTTTAC CTTCTCAAAA CTGATACAGT	720
TTGGGGTGTG GCAGGTATTC ATGGTGCTTG GAATTTTGCT CAGGGTAATC TCTTTGGGAT	780
TTTAGTTAGT GGTCAACCGT CAGAACGCT CTGATGACCT TTTTACCACA AGGCAATCAA	840
GATTGGCTAT CAGGTGGTTC TTTTGGCATA GAAGGTTCCA TTATGACAAG TCTGGTATTA	900
CTACTGCTGA TTGTCTATCT TGCTAATAAA TTAAGAAAG AAAATGAAAG GATGTGACTT	960
CGGTCCGCTC TTTTCTTCGT GAAAATACTA TAAGTATGCT AAAATAGGAA TAGCACATGG	1020
AGAGAGGATT CTTATGATCA ATCACATTAC AGATAATCAA TTTAACTAG TATCAAAATA	1080
TCAACCATCA GGAGATCAAC CCCAAGCTAT CGAGCAGTTG GTGGATAACA TTGAGGGGGG	1140
AGAAAAAGCT CAGATTCTGA TGGGGGCGAC TGAACAGGG AAGACCTATA CTATGAGTCA	1200
GGTCATTTCT AAAGTCAATA AACCAACTCT GGTATTGGC CACAATAAAA CTCTGGCTGG	1260
TCAGCTCTAT GGGGAGTTTA AGGAATTTT CCCTGAAAAT GCAGTTGAGT ATTCGTATC	1320
CTACTATGAT TATTACCAGC CAGAGGCCTA TGTCCCTTCT AGCGATACCT ATATTGAGAA	1380
GGATAGTTCT GTCAATGACG AGATTGACAA GCTTCGCCAC TCAGCTACCT CAGCCCTTTT	1440
GGAGCGTAAT GATGTATTG TCGTGGCCTC AGTCTCTTGT ATCTATGGTT TGGGTTGCC	1500
CAAGGAATAC GCTGATAGTG TCGTTAGTCT CCGTCCTGGT CTAGAGATTT CTCGTGATAA	1560
ACTCTTGAAT GACTTGGTCG ATATTAGTT TGAACGTAAT GATATTGATT TCCAACGCGG	1620
AAGATTTGCG GTTCGTGGGG ATGTGGTAGA GATTTTCCCA GCTTCCCGAG ATGAACATGC	1680
CTTTCGAGTA GAATTTTTTG GAGACGAAAT TGACCGTATT CGTGAAGTTG AGGCTCTGAC	1740
AGGTCAGGTG TTGGGAGAAG TGGATCATTT AGCGATTTTC CCAGCGACAC ACTTTGTGAC	1800
CAATGACGAC CACATGGAAG TTGCCATTGC AAAGATTAG GCCGAGTTGG AAGAACAATT	1860
AGCTGTCTTT GAAAAGGAAG GTAACTGCT TGAAGCCAG CGTTTGAAAC AGCGGACAGA	1920

965

GTATGATATC GAAATGTTGC GTGAGATGGG CTATACCAAT GGGGTGAAA ATTATTCTCG	1980
CCACATGGAT GGACGGAGCG AAGGAGAGCC TCCTTATACG CTCTCGACT TCTTCCAG	2040
TGATTTCTTG ATTATGATTG ACGAGAGTCA TATGACCATA GGGCAAATCA AGGGCATGTA	2100
CAATGGAGAC CGTTCGCGTA AAGAAATGCT GGTAAATTAT GGTTCGGT TGCCGTCTGC	2160
TTTGGACAAT CGTCCTCTCC GTCGGGAGGA GTTTGAGAGT CACGTCATC AGATTGTTTA	2220
CGTTTCAGCG ACACCTGGTG ACTATGAAAA TGAACAGACC GAGACAGTGA TTGAGCAAAT	2280
CATTCGTCCA ACGGGACTCT TGGATCCAGA GGTGGAAGTC CGTCCGACTA TGGGACAGAT	2340
TGATGACCTC TTGGGTGAAA TCAATGCCCG CGTTGAAAAA AATGAGCGTA CCTTATCAC	2400
AACTTTGACC AAGAAAATGG CAGAGGATTT GACCGACTAC TTCAAGGAAA TGGGTATCAA	2460
GGTCAAGTAC ATGCACTCGG ATATCAAGAC CTTGGAACGG ACGGAGATTA TCCGTGACCT	2520
GCGCTTGGGT GTCTTTGATG TCTTGGTCGG AATTAACTTG CTCCGTGAAG GAATTGACGT	2580
TCCTGAAGTG AGCCTCGTAG CTATTCTCGA TGTGACAAG GAAGTTTCC TTCGCAACGA	2640
ACGTGGACTC ATCCAGACCA TTGGACGTGC TGCACGTAAT AGCGAAGGTC ATGTTATCAT	2700
GTATGCGGAC ACGGTTACCC AGTCTATGCA ACGTGCTATC GATGAAACTG CCCGCCGTCG	2760
CAAAATCCAG ATGGCCTATA ATGAAGAACA TGGTATCGTT CCACAAACCA TCAAGAAAGA	2820
AATCCGTGAC TTGATTGCTG TGACCAAGGC AGTTGCTAAG GAAGAAGACA AGGAAGTCGA	2880
TATCAATAGC CTCAACAAAC AAGAGCGCAA AGAACTAGTC AAAAAGCTTG AGAAACAAAT	2940
GCAAGAAGCA GTTGAAGTGC TTGACTTTGA ACTAGCAGCT CAGATTCGTG ATATGATGCT	3000
GGAAGTCAAG GCCTTGGATT AGGGGAATAG TATGATTTAT TTAAGAAAGT TAAAGAAAGA	3060
AGATTTGATG TCTTTATGGG AAATGGCTTA TTCACAGCTT AATCCAGTTT GGAAACAGTA	3120
TGATGCTCCC TATTATGATG ATTATCAGTA TTTTCAAAT TTTAAAGAAT TCGAACTACA	3180
AAAATCAGAA TCCATTTTAA GCAACTCAAA TCGCCTTGGT ATTTTGTGTTG ATGATAAACT	3240
AGTTGGGACT GTTTCGCGTT ATTGGGTATG TAAAGAAACA AGATGGATGG AATTGGGAAT	3300
TGGTATTTAT GATAAAAAAT TCTGGAACAC TGGTATTGGG AAAGTTGCTA TGTGTCAGTG	3360
GATAGATAGG ACGTTTCAGG ATTACTTGA GTTGGAGCAT CTGGGTTTGA CAACTTGGTC	3420
AGGAAATATT GGTATGATGA AACTTGCTGA AAAATTAAGA ATGAAAAAAG AAGCTCATAT	3480
TCCAAAAGTT CGTTATTATC AAGGTAAATA TTTTGACAGT ATTAAATATG GTATTTTGAG	3540
AGAAGACTGG GAGAAAATAA ATGACGGTTA TTATCAAATC AATGGAAACT CCTGAAGAGA	3600
TAGAAGGTAA ATCCTTCGTT CACTGGCAAA CGTGGAGAGA GGCTTATGAT GACCTTTTGC	3660

966

CTGCGGAATT TCAGGAGACA ATGACATTAG AAAGATGTCTG ACTCTTTAGT CAAAAGTATC	3720
CAGAAAATAC ATTGATTGCG ATGGATGGTG TGAAGATAGT TGGTTTTATA AGTTATGGCA	3780
ACTGTCGTGA TGAGACTATT CAAGCTGGTG AAATTATTGC TTTATATGTT TTTAAAGACT	3840
ATTATGGAAA AGGAATCGCA CAAAAGTTAG TGAAAGCAGC TTTGACTGAT CTTAATCATT	3900
TTTCTGAAAT TTTCTTATGG GTATTGAAAG ATAACAAGCG CGCCATTGCT TTCTATCAAA	3960
AAATGGGTTT TACTTTTGAT GGACAAGAAA AAATACTTGA ACTTGGAAAG CCTATAAAGG	4020
AAAAACGGAT GGTATTCTAT TCTAAATAAT TCTCAAAAGT AAAAGCTAAT ATGGTACCAA	4080
GTCTGAAAAT TTAATAAATT AGAAAGCGAG TAAATTTATG TCCCGTTCCC AATTAACAAT	4140
TTTAACAAAT ATCTGTCTGA TTGAAGACCT CGAAACTCAG CGCGTGGTGA TGCAGTATCG	4200
CGCCCCTGAA AACAATCGCT GGTCTGGTTA TGCCTTTCCT GGAGGTCATG TAGAAAATGA	4260
TGAGGCTTTT GCGGAGTCTG TCATTCTGTA AATCTACGAA GAAACAGGGT TGACTATCCA	4320
AAATCCTCAA CTTGTCGGCA TTAAAAATTG GCCACTAGAT ACAGGTGGGC GCTATATTGT	4380
CATTTGTTAT AAGGCGACTG AGTTCCTCTG TACCCTTCAA TCTTCAGAAG AGGGAGAAGT	4440
TTCTTGGGTG CAAAAGACC AGATTCCAAA CTAAATCTG GCCTATGATA TGCTACCATT	4500
GATGGAAATG ATGGAAGCTC CCGACAAGTC AGAGTTTTC TACCCTCGCC GTACAGAAGA	4560
CGATTGGGAA AAGAAAATCT TCTAGTCTTT TACTAAATAA CCTAGCTGAT CCAAGGCCTC	4620
CTCGATATAG TGGAGGTCTT GTTGTGTCTC GGCTTCAACT AGGTGATAAT GAATACCATC	4680
TGTTAACTCA GAAATTGGCT TAAAGTCAGA ACGTTCAACT TGTTCTAGAA AATGTTGCAC	4740
GTGCGGCGA CAGGTCAGTT TTAGTAAGGT TTCAATCTCT CCATAAACAG GATGATCAAT	4800
CAAGATATTT TGAACGCGAC CACCATTATC TACGATAGCA AGTAATTCTC GTCCAATTTC	4860
TTCAACTTCA TGCTTGACCT TAAATAATTT GTGATGATAA GTATTGTCAT TAGCATCTTT	4920
ATAGATATAA CCACGATTGG TAGATAGAAT TGGAGATCCA TCAGCTCTTA AAATTGCAAT	4980
ATCTTGAACA ATAACTTGTC GAGTGACATG AAAGTGCTCA	5020

(2) INFORMATION FOR SEQ ID NO: 143:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4965 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

AAAAAGTGGC AATCCATTGA TTGGCCACTT CATTTAGAGA ATTATCGTCT CGCCCTTGAA	60
---	----

967

GAAGAAGGTC GTGTAGTACT TGAGTTACTG CTATCGCTAG AACTACTACT TGAAGTGTG	120
GAGCTGGATG GAGTTGGTAG ACTCCCCACA ATACTAGACC AAGCATTCTG ATAATCCGCA	180
TCACTTCCGC CAATAGCAAA GCGATAACTT GTCGCTGGCG CTCCTGACTT ATTAGCCCAA	240
TAGCTGGTAA CAGTCGAACC TGTGACCTCT ACTTCTTTTC CTTCAACAGA AACCTTCTCT	300
GGTTTTTGAC CTGTTGATTT CAAGACTTCC GATTTCACTA CACTAGGATC TAAAGCAAAG	360
CGCTCGTTCC CCCAAATGCT TGGGGAAGCT TGCTGAATCG CATTTACCAG ATGAGCCATG	420
TAATTAGAGT TATTAGAATA ACCTGCTCTA CGTGACAATG AATGATTATC ATCATGCCCA	480
ATCCAGCCAC CTAGGGTTAA TCTAGGTGTC GAAAGCATGA GCCACATATT TTCGTCTTGG	540
TTGGTTGTAC CAGTCTTCCC AATCCAATCT GCATTAGCCA GAGTAGGATT TAAAGAAGTC	600
AGGTTAGACT TGAAGGTTGT TGTACACGA GAGGATAGAA CTTCTCGTAG CAATCCCTGC	660
ATAATCGTCG CAGTAGCTTT TGAATAGACT TGAACCGGTT TATCCTGATA CTCATACACC	720
ACTCTACCAT CTGCTGCTTC AATCTTTGAA ATCACATGCT TCTGATGATA AACTCCATTA	780
TTAGCTAAGG TCTGATAGCC ATTGGTATGC TGGGCAACTG TGACTTCAAT ACCACCACCC	840
ATTGGCAAGC TCTCAATACC GTACTCAGGA ATCTCGTAAC CCATCTTTTC CATATAACCC	900
TTGACATCAA CACCCTTTTC ACGGAGCATA CGATAGGTCC AGTAAGCAGG GATATTCCAT	960
GAATAGTTCA GAGCTTCTCC CAAGGTCATC ATTCCTGTTT CCTTGCTATT AGCATACATA	1020
ATCGGATTGC CATTAGCAAA GTTTGTTGGA TAGTTAGATA GAATCGTTTC ACTTCCCATC	1080
AAGCCCTGGT CAATAGCAAT ACCGTAGGCC AGCAAGGGCT TGGTAGTAGA AGCTGGCGAA	1140
CGTTTGGTAT CAAAGGCATG ATTATTTTGA TTTTCTTGAT AATTACGACC ACCTACAAAG	1200
CCTAGAATAG CACCTGTTTG GTTATCCATC AAGACATTCC CTACTTCTAC ACGACCTGTT	1260
CCATCGTCTA AAAGATAGCC ATAATCAGCA ACCGCACTTT GCATGGCAGA ATGAATTTTC	1320
TGATCTATGG TAGTAGTAAT CTTATAACCA CCATTTTCAA TTTCTTGGC TGCCAAATCT	1380
CGATAAACT TCTGAGTTGC CTCATTTTTC AACTCCTTAG CGGAGACATT GTCTCTCTGA	1440
GCTAGATAGT CATACATACG TTCTTGAGCT TCTGCCAAAG TTGTAAAGTA TAAATAGTCT	1500
CGTGAAATTC CTGTAACCGT GCCCGATGGT AAAAAGTCCT GTTTAAGGTC ATAATCCTTG	1560
TACTGAGAAT ACTCGTCTTT GCTTAATGCA CCTGTACGAT ACATACTGTA AAGAACTGCC	1620
TTAGCCCGTC TTAAGCCAAT TTCTAGGTCT TCATCACTCT TCAACTCCCC AGTATTTTCA	1680
TAAGGAGAGT AAGTAATGGG ACTCTGTGGA AGTCCTGCTA AAAATGCTGC TTGAGGAACA	1740
GTCAACTGAC TGGCATCTAC ACCGAAAATT CCCTCAGCTG CTTGCCGAGC CCCTGCAATA	1800

968

TTCTGTCCCT TATTATTTTCG GCCAAAGGGA GCCACATTGA GATAGGTCGT TAAAATCTCA	1860
TCTTTATTCA TGGCGCGTTC CAAGGCAAGA GCATCCACAA TCTCTGCCGC CTTACGAGCC	1920
AAGGTCGGCG CATCCCCAAC CACCTGCTGT TTAATTAGTT GCTGGGTCAA GGTGGAACCC	1980
CCACTAGAGG AACCCAAACC TACAAATTTC CCCAAGGTCG CACGAATCAC CGCCTTGGGT	2040
ACTACACCCT TATGTTCTTT AAAGTGTTC TCTTCTGTCG CAATGATAGC CTTCTTCAGA	2100
TTTTCCGAAA TTGCTCAGA TGAGATAGAA GTGCGCAACA AATCACTCTC TATGGAAGCA	2160
ATCACCGTCC CGTCCGAATA GGTAATCTCT GAAATAGAAG AGATGTCCTT GACCTGATTC	2220
ACCAATTCTT CTGCTGAGG CACCCGAACC TTGTCAAATA AGGCCACTCC GTATCCCAAA	2280
GCAATCCCAG CTCCCAACAT TCCTCCTAGA AAACCGAGTA CAAAGAGTAA GTTAAATAAG	2340
GCTTTTATAC TCAGTAAAAT AGCTGGGAAA ATGACTGACT TATCTAAGGT TTTAGATTTT	2400
TTGGTACTTG AACCTTTCTT GCCAGGTCTA GCTGATTTTT TATTTTTTTG TTTTGTCTGG	2460
AAAAATTCCA GCATTTTTCG TTTTAATTCA TTAAATTGAT TTTGCATGGA TTTCTCACT	2520
TTATCTATTA TACCACAAA GGGAAATTT CAATAAATA GCCACTTTCT TCCCTATTCT	2580
GCTAGGCTAT TGCCCAAGTT TGTGATACAA TAGGTAGAAA CAATAATTT AAAAAGGAGA	2640
AAAAACACAT GCACATTTTT GATGAGCTAA AAGAGCGTGG TTTGATATTT CAAACGACTG	2700
ATGAAGAAGC TTTGCGTAAA GCCCTAGAAG AAGGTCAAGT TTCTTATTAT ACTGGCTACG	2760
ATCCAACGTC TGACAGCCTT CACCTAGGCC ACCTTGTCGC AATCTTGACA AGTCGTCGCT	2820
TGCAACTAGC AGGTCACAAA CCTTATGCGC TCGTTGGCGG TGCTACAGGT CTCATCGGAG	2880
ATCCGTCCTT CAAAGATGCT GAACGTAGTC TCCAAACAAA AGACACAGTA GATGGCTGGG	2940
TCAAGTCTAT CCAAGGACAA CTTTCTCGTT TTCTTGACTT TGAAAATGGC GAAAACAAGG	3000
CTGTCATGGT CAACAACAC GACTGGTTTG GCAGCATCAG CTTCATTGAC TTCCTCCGTG	3060
ATATTGGAAT ATACTTCACG GTCAACTACA TGATGAGTAA GGAATCTGTT AAAAAACGGA	3120
TCGAAACAGG AATTTCCTTAC ACTGAGTTTCG CTTACCAAAT CATGCAAGGG TATGACTTCT	3180
TCGTCCTTAA CCAAGACCAT AATGTCACCTC TTCAAATCGG TGGTTCCTGAC CAGTGGGGAA	3240
ATATGACAGC TGGTACCGAA TTGCTTCGTC GTAAGGCGGA CAAGACTGGT CACGTTATCA	3300
CTGTTCCACT AATCACAGAT GCAACTGGTA AGAAATTTGG TAAATCAGAA GGAAATGCCG	3360
TCTGGCTCAA TCCCGAAAAG ACTTCTCCAT ACGAAATGTA CCAATTCTGG ATGAACGTGA	3420
TGGACGCTGA CGCTGTTTCG TTCTTGAAAA TCTTTACTTT CTTGTCACCT GATGAGATTG	3480
AAGATATTCG TAAACAATTT GAAGCAGCGC CACACGAACG CTTGGCTCAA AAAGTCTTGG	3540
CTCGTGAAGT TGTTACACTT GTTCACGGAG AAGAAGCCTA CAAAGAAGCA CTTAACATCA	3600

969

CTGAGCAACT CTTTGCAGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC	3660
TTCGTGGTGT GCCCAACTAC CAAGTACAGG CAGACGAAAA CAACAATATC GTGGAAGTGC	3720
TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG	3780
CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGAATA TGTCTTGAGT GACGCTGATA	3840
AGTTAGAGAA TGAAGTACT GTTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT	3900
ACTAAACTAT TCAACATTTA TCTATAACA AAGGAGTTAA CCTCGAGAAA GGTAACCTCT	3960
TTTGTCTGTT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC	4020
GCAAGGTTGT TAGATTATGT AAGATAGAGA GATTGAAGG ACTGAACCAA TTAATAAAGC	4080
CAAAGCCAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG	4140
TTTGCAAAGA TGATGATAAC GAATCCAACT CTTGAAGAA ATCCAAACGA TTATCTAACA	4200
ATAAGATATC ACTCATCTGC TTAGAAATAT CTGACTCTC ATTCATCACC ACACCGATAT	4260
CTGATAGAGT TAAAGCCGCT GAGTCATTCA ATCCATCTCC AACCATCAAA ATAGTGTGAC	4320
CTGCTTTCTG CAGTTTCTCT ACTAACTCAA ATTTCCCATC AGGTTTCAAG TCTGTATAGA	4380
CCTGATCAAA GGGCAAATCT TTGACTAATT CCTCTGTCCT AATCAAGGTG TCTCCTGTTG	4440
CCAGAATCAA TTTTTCCTCC TGTGCCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC	4500
TCAAAGGAGT ATGAATGCAG AACATTCCAA TCAATTCAAT TTGATAAGCC AAGAATAAGA	4560
GATTGTAGTG ACTCTGTAC TCTTCAATTA AAGCATTTTG TTCTGAACTG ATATGAATCT	4620
GCTCATCCTG CATCAAGACA TAATCCCAA TAAGAACTGG TTGGCCATCT ATATGAGATT	4680
TGATCCCTTT GCTTGCGATA TATTGGAGTT TCCCATGCAT TTCCTCATGT TCAATTCCCT	4740
CTATCTCAGC TTGCTTGACG ATGGCATTAG CAATAGGATG ATAAATGTGT TCCTCAAGAC	4800
AGGCACTGAT TCTGAGAATA TCTTCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA	4860
CTATAGGATA ACTAGTTGTG ATTGTTCTTG TCTTATCAAA CAAGAAAGTA TCAACTTCCA	4920
GATATTTCTC CCTGTTGTGG CCTCTGGCTG TCATCTCTGT GCTGG	4965

(2) INFORMATION FOR SEQ ID NO: 144:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 3232 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

970

CAGGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTCGCT ACTTGCGCCA AAACAAGGAT	60
TCGATAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATCCCCCA	120
AACTGCAATA TGCAAGGTCA GAAAGAATGC CTTTGTATAT AGTGGTAGAT ATTGTTC AAC	180
AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT	240
AAAATCTTCT TTGGATAATA TCTATTTTTT ATTGCCGTTA TAAGGATTTT TATCATAGAC	300
ATAAAATTTC TGAATTTTCC AAACAAAATA TTTTAAAAGT TTTGAAAAAG AGTTAAGATA	360
TTTGTGTAAT ACACAAAGTA AACGCTTACT TATTAAGGAG GACATTTTAT GTCATACAAA	420
ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTTGGA GCCAATGGCG	480
CAACAAGTTA TTCCTAAAGC AGCATTGGC TATATCGCTA GTGGGCGGG AGATACTTTC	540
ACTTCTTTCC AGTGATTTTA GCGTCAGGT CTTTTAGTT TTTAAAGATT ATCCGTGAAT	600
TTCTTGCTTA TTTATGATAA AATGGGAGTG TCGCAAAAAA TGACTCATCG TATTCAATTT	660
TGAGTAAAC TAGGAGGATC CCATGTCTAC AGAACATATG GAAGAACTAA ATGACCAGCA	720
GATCGTTTCG CGTGAAAAA TGCTGCGCT CCGCAACAA GGAATCGATC CTTTCGGAAA	780
ACGTTTGA CGTACTGCAA ATTCACAAGA ATTAAAAGAT AAATATGCCA ACCTCGATAA	840
AGAACAATTA CACGATAAAA ACGAAACAGC TACTATCGCA GGACGCTTGA TAACCAAACG	900
TGGTAAAGGA AAAGTTGGTT TTGCCCACCT TCAAGACCGC GAAGGCCAGA TTCAGATCTA	960
CGTTCGTAAG GATGCTGTCG GTGAAGAAA CTACGAAATC TTCAAAAAG CAGACCTTGG	1020
TGACTTCTT GGTGTCGAAG GTGAAGTGAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA	1080
GGCAACCCAC ATCACACACT TGTCTAAGGC TCTCGTCCT CTTCCTGAGA AATTCCATGG	1140
TTTGACAGAC GTTGAAACAA TTTACCGTAA ACGTTACCTT GACTTGATTT CTAATCGTGA	1200
AAGCTTTGAA CGCTTTGTCA CTCGTTCAAA AATCATCTCT GAAATCCGTC GTTACCTTGA	1260
CCAAAAAGGA TTCCTTGAAG TGGAACACC GTTCTTCAT AATGAAGCCG GTGGTGCTGC	1320
TGCCCCGCCA TTTATCACCC ACCACAATGC CAAAACATT GACATGGTGC TTCGTATCGC	1380
GACTGAGCTT CACTPAAAC GCCTTATCGT GGGTGGTATG GAACGTGTCT ATGAAATTGG	1440
CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATAAC CCTGAGTTCA CTTCTATCGA	1500
AGTTTACCAA GCTTATGCAG ACTTCCAAGA CATCATGGAC TTGACTGAAG GCATTATCCA	1560
ACACGCTGCT AAATCAGTCA AAGGTGATGG CCCAGTCAAC TACCAAGGTA CTGAAATCAA	1620
GATTACGAA CCATTTAAGC GTGTTTATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT	1680
CGATTTCTGG CAAGACATGA CTTTGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT	1740
TCCAGTTGAG AAACACTACA CTGAGGTTGG TCACATCATC AATGCCTTCT TTGAAGAGTT	1800

971

TGTTGAAGAA ACTTTAATCC AACCAACCTT TGTCTATGGA CATCCAGTAG CTGTATCTCC	1860
ACTCGCTAAG AAAAATCCTG AAGACCAACG CTTTACTGAC CGTTTCGAGC TCTTTATCAT	1920
GACTAAGGAG TACGGTAATG CCTTTACTGA GTTGAACGAC CCAATCGACC AACTTAGCCG	1980
TTTGAAGCC CAAGCTAAAG CCAAAGAACT TGGTGATGAT GAAGCGACAG GAATCGACTA	2040
TGACTACATT GAAGCTCTTG AATACGGTAT GCCACCAACA GGTGGTTTGG GAATCGGTAT	2100
CGACCGTCTC TGCATGCTCC TCACTGATAC AACAACTATC CGTGATGTAT TGCTCTTCCC	2160
AACAATGAAA TAAATTCCTA TCCTCTGGGT CTTATCAGAG GATTTTTTGA TTCAAAAAGA	2220
GACTGAATTT AAGGAGAAAA TGAAGTGTAG TATATTGAAA TTGAAATAGT ACACTTTGAT	2280
TTCTAAGACA TTGTTAGAAA TTGGTTTAAA TTCCCTAAGC AATTGTGCA TGTTTTATTT	2340
CATTTTACGA TAGTACGCTG AAACTTTTCA AAAAGTACTA GAAATTGACT TGGATTCCCC	2400
AATTGATTTG TTCAGATTCA CTATAAATAA AAAATTAATA AGTGGGATAG GAAGTTAGCG	2460
TCAACTAGGA TAGTATCTTG CTTAAACAGT ATATATGGGA TTGATATAAG TCCATAGGTC	2520
CTATTAGAGG ATGTTCTGGT GTCTTATTCA CTTGTTTTTT ATAGTATTAG TAGATAGAAT	2580
CAGCAATAA AAACCAAAT CATTCATACC TCTCTCACT AGATGTAACT TACAAACCC	2640
CTGACCTCAT GAGCCACTTT CTTCTCTC TCATGAGGTCAG TTTTACTTTC TGCTGTTCCA	2700
GTATCGTTTT TCCTCGCTAG ATTTCTCTCA AAGGGCAGAC TCCTCCCTTG GTGCGTCACA	2760
CGATTTTTTC ATCTCGACTG TTCTTTAATG CATCATTAAC GACGCTTTTC TTCTAGGTGG	2820
TTCATAAGGA ACAGGAAGAT TCAGGTTGAC TTTTCTAATC CTAGAATAAA GTGCTGAAAA	2880
CAATTCGGAA TAGGCATAGA GACTAGACAA TTTGAGGAGC TGCTTGCGTC CTGTTCGAAC	2940
ACATTTTCCC ACCACGTGAA GAAAAAGATG GCGGAAGCGT TTGATTGTTA AAGTTGGAA	3000
GTCACCTCCA GCTAGATGTT TGAGAAAAAG ATAGAGATTG TAGGCGATAC AGCTCATCAT	3060
CATACGAAT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTATCGCCAA AAAATCCCTC	3120
CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACGTCCA CGATAAAGCT GAAACTGGTC	3180
TTGGCTTGTT CCACTCGTCA TATTTGTAAC GAGAGAAATA ACATCGTAGA AC	3232

(2) INFORMATION FOR SEQ ID NO: 145:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10711 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

972

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

CCGGAGAAAA TGATGAAAAG TTCAAAAC TA TTTGCCCTTG CGGGCGTGAC ATTATTGGCG	60
GCGACTACTT TAGCTGCATG CTCTGGATCA GGTTCAGCA CTAAGGTGA GAAGACATTC	120
TCATACATTT ATGAGACAGA CCCTGATAAC CTCAACTATT TGACAACTGC TAAGGCTGCG	180
ACACAAATAT TACCAGTAAC GTGGTTGATG GTTTGCTAGA AAATGATCGC TACGGGAACT	240
TTGTGCCGTC TATGGCTGAG GATTGGTCTG TATCCAAGGA TGGATTGACT TACACTTATA	300
CTATCCGTAA GGATGCAAAA TGGTATACTT CTGAAGGTGA AGAATACGCG GCAGTCAAAG	360
CTCAAGACTT TGTAACAGGA TTAAAATATG CTGCTGATAA AAAATCAGAT GCTCTTTACC	420
TTGTTCAGA ATCAATCAAA GGGTTGGATG CCTATGTAAA AGGGGAAATC AAAGATTTC	480
CACAAGTAGG AATTAAGGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACCAG	540
AAAGCTTCTG GAATTCTAAG ACAACCATGG GTGTGCTTGC GCCAGTTAAT GAAGAGTTTT	600
TGAATTCAAA AGGAGATGAT TTTGCCAAAG CTACGGATCC AAGTAGTCTC TTGTATAACG	660
GTCCTTATTT GTTGAAATCC ATTTGTGACCA AATCCTCTGT TGAATTTGCG AAAAATCCGA	720
ACTACTGGGA TAAGGACAAT GTGCATGTTG ACAAAGTTAA ATGTGCATTC TGGGATGGTC	780
AAGATACCAG CAAACCTGCA GAAAACCTTA AAGATGGTAG CCTTACAGCA GCTCGTCTCT	840
ATCCAACAAG TGCAAGTTTC GCAGAACTTG AGAAGAGTAT GAAGGACAAT ATTGTCTATA	900
CTCAACAAGA CTCTATTACG TATCTAGTTG GTACAAATAT TGACCGTCAG TCCTATAAAT	960
ACACATCTAA GACCAGCGAC GAACAAAAGG CATCGACTAA AAAGGCTCTC TTAAACAAGG	1020
ATTTCCGTCA GGCTATTGCC TTTGGATTG ACCGTACAGC CTATGCCTCT CAGTTGAATG	1080
GACAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTTGTTCAAG	1140
CAGATGGTAA AAACCTTGGC GATATGGTCA AAGAGAAAT GGTCACCTAT GGGGATGAAT	1200
GGAAGGATGT TAATCTTGCA GATTCTCAGG ATGGTCTTTA CAATCCAGAA AAAGCCAAGG	1260
CTGAATTTGC TAAAGCTAAA TCAGCCTTAC AAGCAGAAG AGTCCAATTC CCAATTCATT	1320
TGGATATGCC AGTTGACCA ACAGCAACTA CAAAAGTTCA GCGCGTCCAA TCTATGAAAC	1380
AATCCTTGGA AGCAACTTTA GGAGCTGATA ATGTCATTAT TGATATTCAA CAACTACAAA	1440
AAGACGAAGT AAACAATATT ACATATTTTG CTGAAAATGC TGCTGGCGAA GACTGGGATT	1500
TATCAGATAA TGTCGGTTGG GGTCCAGACT TTGCCGATCC ATCAACCTAC CTTGATATTA	1560
TCAAACCTTC TGTAAGGAGAA AGTACTAAAA CATATTTAGG GTTTGACTCA GGGGAAGATA	1620
ATGTAGCTGC TAAAAAGTA GGTCTATATG ACTACGAAAA ATTGGTTACT GAGGCTGGTG	1680
ATGAGACTAC AGATGTTGCT AAACGCTATG ATAAATACGC TGCAGCCCAA GCTTGGTTGA	1740

973

CAGATAGTGC TTTGATTATT CCAACTACAT CTCGTACAGG GCGTCCAATC TTGTCTAAGA	1800
TGGTACCATT TACAATACCA TTTGCATTGT CAGGAAATAA AGGTACAAGT GAACCAGTCT	1860
TGTATAAATA CTTGGAACCT CAAGACAAGG CAGTCACTGT AGATGAATAC CAAAAGCTC	1920
AGGAAAAATG GATGAAAGAA AAAGAAGAGT CTAATAAAAA GGCTCAAGAA GATCTCGCAA	1980
AACATGTGAA ATAACTGTTG CAAAATATAA GAAAGGATTT AGTATTTCCC TTGAATGCTG	2040
AATCCTTTTT TACATTTGTA AAGAAAGATT CTAAATGTA CGGACCCCA AAAGTTGGAG	2100
CCTCTTTTTG TCAGAATAGA GAAAATTTTT GTTAATTTTA CTTGTTTCCT ATTGCTTTCT	2160
CAGCTATTAT TTGTTATATT AAAAGTATAA TTATTTTTA TTTATCAGAG TTAAGCATTG	2220
CACCTTCAGA GGAAGGAGTA TTTTTTAAAA AGAAAATGTA AACGTTTGCT CAAAATGAA	2280
AGGATTTAGA AGTTTATGAA TAAAGGATTA TTTGAAAAAC GTTGTAATA TAGTATTCGG	2340
AAATTTTCAT TAGGTGTTGC TTCTGTTATG ATTGGAGCTG CATTCTTTGG GACAAGTCCG	2400
GTTCCTGCAG ATAGCGTGCA GTCTGGTTCC ACGCGAACT TACCAGCTGA TTTAGCTACT	2460
GCTCTTGCAA CAGCAAAAGA GAATGATGGG CGTGATTTTG AAGCGCTAA GGTGGGAGAA	2520
GACCAAGGTT CTCCAGAAGT TACAGATGGA CCTAAGACAG AAGAAGAACT ATTAGCACTT	2580
GAAAAAGAAA AACCGGCTGA AGAAAAACCA AAAGAGGATA AACCTGCAGC TGCTAAACCT	2640
GAAACACCTA AGACGGTAAC CCCTGAATGG CAAACGGTAG CGAATAAAGA GCAACAGGGA	2700
ACAGTCACTA TCCGAGAAGA AAAAGGTGTC CGCTACAACC AACTATCCTC AACTGCTCAA	2760
AATGATAACG CAGGCAAACC AGCCCTGTTT GAAAAGAAGG GCTTGACCGT TGATGCCAAT	2820
GGAAATGCAA CTGTTGATTT AACCTTCAAA GATGATTCTG AAAAGGGCAA ATCACGCTTT	2880
GGTGTCTTTT TGAAATTTAA AGATACCAAG AATAATGTTT TTGTCGGTTA TGACAAGGAT	2940
GGCTGGTTCT GGGAGTATAA ATCTCCAACA ACTAGCACTT GGTATAGAGG TAGTCGTGTT	3000
GCTGCTCCTG AAACAGGATC AACAAACCGT CTCTCTATCA CTCTCAAGTC AGACGGTCAG	3060
CTAAATGCCA GCAATAATGA TGTCAATCTC TTTGACACAG TGACTCTACC AGCTGCGGTC	3120
AATGACCATC TTAAAAATGA GAAGAAGATT CTCTCAAGG CGGGCTCTTA TGACGATGAG	3180
CGAACAGTTG TTAGCGTTAA AACGGATAAC CAAGAGGGGG TAAAAACAGA GGATACCCCT	3240
GCTGAAAAAG AAACAGGTCC TGAAGTTGAT GATAGCAAGG TGACTTATGA CACGATTCAG	3300
TCTAAGGTCC TCAAAGCAGT GATTGACCAA GCCTTCCCTC GTGTCAAGGA ATACAGCTTG	3360
AACGGGCATA CTTTGCCAGG ACAGGTGCAA CAGTTCAACC AAGTCTTTAT CAATAACCAC	3420
CGAATCACCC CTGAAGTCAC TTATAAGAAA ATCAATGAGA CAACAGCAGA GTAATTGATG	3480

974

AAGCTTCGCG ATGATGCTCA CTTAATCAAT GCGGAAATGA CAGTACGCTT GCAAGTTGTA	3540
GACAATCAAT TGCACTTTGA TGTGACTAAG ATTGTCAACC ACAATCAAGT CACTCCAGGT	3600
CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA	3660
GTCTCTGTTT CTAGTAATCA AACTGGTGCT AAGTTTGATG GGGCAACCAT GTCAAACAAT	3720
ACGCATGTCA GCGGAGATGA TCATATCGAT GTAACCAATC CAATGAAGGA TTTGGCTAAG	3780
GGTTACATGT ATGGATTGTG TTCTACAGAT AAGCTTGCTG CTGGTGTTTG GAGTAACTCT	3840
CAAAACAGCT ATGGTGGTGG TTCGAATGAC TGGACTCGTT TGACAGCTTA TAAAGAAACA	3900
GTCGGAAATG CCAACTATGT AGGAATCCAC AGCTCTGAAT GGCAATGGGA AAAAGCTTAT	3960
AAGGGCATTG TTTTCCAGA ATACACGAAG GAACTTCCAA GTGCTAAGGT TGTATCACT	4020
GAAGATGCCA ATGCAGACAA GAACGTTGAT TGGCAAGATG GTGCCATTGC TTATCGTAGC	4080
ATTATGAACA ATCCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG	4140
ATGAACTTTG GTTCTCAAGC AAAAAACCA TTCCTTATGA CCTTGGATGG TATCAAGAAA	4200
ATCAATCTCC ATACAGATGG TCTTGGGCAA GGTGTTCTCC TTAAGGATA TGGTAGCGAA	4260
GGCCATGACT CTGGTCACTT GAACTATGCT GATATTGGTA AGCGTATCGG TGGTGTGCAA	4320
GACTTCAAGA CCCTAATTGA GAAGGCTAAG AAATATGGAG CTCATCTAGG TATCCACGTT	4380
AACGCTTCAG AAACCTATCC TGAGTCTAAA TACTTCAATG AAAAAATTCT CCGTAAGAAT	4440
CCAGATGGAA GCTATAGCTA TGGTTGGAAC TGGCTAGATC AAGGTATCAA CATTGATGCT	4500
GCCTATGACC TAGCTCATGG TCGTTTGGCA CGTTGGGAAG ATTTGAAGAA AAAACTTGGT	4560
GACGGTCTCG ACTTTATCTA TGTGGACGTT TGGGTAATG GTCAATCAGG TGATAACGGT	4620
GCCTGGGCTA CCCACGTTCT TGCTAAAGAA ATTAACAAAC AAGGCTGGCG CTTTGCATC	4680
GAGTGGGGCC ATGGTGGTGA GTACGACTCT ACCTTCCATC ACTGGGCAGC TGACTTGACC	4740
TACGGTGGCT ACACCAATAA AGGTATCAAC AGTGCCATCA CCCGCTTTAT CCGTAACCAC	4800
CAAAAAGATG CTTGGGTAGG GGAATACAGA AGTTATGGTG GTGCAGCCAA CTATCCACTG	4860
CTAGGTGGCT ACAGCATGAA AGACTTTGAA GGCTGGCAGG GAAGAAGTGA CTACAATGGC	4920
TATGTAACCA ACTTATTTGC CCATGACGTC ATGACTAAGT ACTTCCAACA CTTCACTGTA	4980
AGTAAATGGG AAAATGGTAC ACCGGTGACT ATGACCGATA ACGGTAGCAC CTATAAATGG	5040
ACTCCAGAAA TGCAGTGGA ATTGGTAGAT GCTGACAATA ATAAAGTAGT TGTAACCTCGT	5100
AAGTCAAATG ATGTCAATAG TCCACAATAT CGCGAACGTA CAGTAACGCT CAACGGACGT	5160
GTCAATCAAG ATGGTTCAGC TTAAGTGACT CCTTGGAAC TGGATGCAAA TGGTAAGAAA	5220
CTTTCTACTG ATAAGGAAAA GATGTACTAC TTCAATACGC AGGCCGCTGC AACAACTTGG	5280

975

ACCCTTCCAA GCGATTGGGC AAAGAGCAAG GTTTACCTTT ACAAGCTAAC TGACCAAGGT	5340
AAGACAGAAG AGCAAGAAGT AACTGTAAAA GATGGTAAAA TTACCCTAGA TCTTCTAGCA	5400
AATCAACCAT ACGTTCTCTA TCGTTCGAAA CAACTAATC CTGAAATGTC ATGGAGTGAA	5460
GGCATGCACA TCTATGACCA AGGATTTAAT AGCGGTACCT TGAAACATTG GACCATTTCA	5520
GGCGATGCTT CTAAGGCAGA AATTGTCAAG TCTCAAGGGG CAAACGATAT GCTTCGTATT	5580
CAAGGAAACA AAGAAAAAGT TAGTCTCACT CAGAAATTAA CTGGCTTGAA ACCAAATACC	5640
AAGTATGCCG TTTATGTTGG TGTAGATAAC CGTAGTAATG CCAAGGCAAG TATCACTGTG	5700
AATACTGGTG AAAAAGAAGT GACTACTTAT ACCAATAAGT CTCTCGCGCT CAACTATGTT	5760
AAGGCCTACG CCCACAATAC ACGTCGTGAC AATGCTACAG TTGACGATAC AAGTTACTTC	5820
CAAAACATGT ACGCCTTCTT TACAACCTGGA GCGGACGTCT CAAATGTTAC TCTGACATTG	5880
AGTCGTGAAG CTGGTGATCA AGCAACTTAC TTTGATGAAA TTCGTACCTT TGAAAACAAT	5940
TCAAGCATGT ACGGAGACAA GCATGATACA GGTAAAGGCA CCTTCAAGCA AGACTTTGAA	6000
AATGTTGCTC AGGGTATCTT CCCATTTGTA GTGGGTGGTG TCGAAGGTGT TGAAGATAAC	6060
CGCACTCACT TGTCTGAAAA ACACAATCCA TATACACAAC GTGGTTGGAA TGGTAAGAAA	6120
GTCGATGATG TTATCGAAGG AAATTGGTCA CTCAAGACAA ATGGACTAGT GAGCCGTCGT	6180
AACTTGGTTT ACCAAACCAT CCCACAAAAC TTCCGTTTTG AAGCAGGTAA GACCTACCGT	6240
GTAACCTTTG AATACGAAGC AGGATCAGAC AATACCTATG CTTTGTAGT CGGTAAGGGA	6300
GAATTCCAGT CAGGTCGTCG TGGTACTCAA GCAAGCAACT TGGAAATGCA TGAATTGCCA	6360
AATACTTGGA CAGATTCTAA GAAAGCCAAG AAGGCAACCT TCCTTGAGAC AGGTGCAGAA	6420
ACAGGCGATA CTTGGGTAGG TATCTACTCA ACTGGAAATG CAAGTAATAC TCGTGGTGAT	6480
TCTGGTGGA ATGCCAACTT CCGTGGTTAT AACGACTTCA TGATGGATAA TCTTCAAATC	6540
GAAGAAATTA CCCTAACAGG TAAGATGTTG ACAGAAAATG CTCTGAAGAA CTACTTGCCA	6600
ACGGTTGCCA TGACTAACTA CACCAAAGAG TCTATGGATG CTTTGAAAGA GCGGTCCTT	6660
AACCTCAGTC AGGCCGATGA TGATATCAGT GTGGAAGAAG CGCGTGCAGA GATTGCCAAG	6720
ATTGAAGCTT TGAAGAATGC TTTGGTTCAG AAGAAGACGG CTTTGGTAGC AGATGACTTT	6780
GCAAGCTTA CAGCTCCTGC TCAGGCTCAA GAAGTCTTG CAAATGCCTT TGATGGCAAT	6840
GTGTCTAGTC TATGGCATAC ATCTTGGAAT GGTGGAGATG TAGGCAAGCC TGCAACTATG	6900
GTCTTGAAAG AACCAACTGA AATCACAGGA CTTGCTATG TTCCGCGTGG ATCAGGTTCA	6960
AATGGTAACT TGCGAGATGT GAACTTGTT GTGACAGATG AGTCTGGCAA GGAGCATACC	7020

976

TTTACTGCAA CTGATTGGCC AAATAACAAC AAACCAAAAG ATATTGACTT TGGTAAGACA	7080
ATCAAGGCTA AGAAAATTGT CCTTACTGGT ACCAAGACAT ACGGAGATGG TGGAGATAAA	7140
TACCAATCTG CAGCGGAAC TATCTTTACT CGTCCACAGG TAGCAGAAAC ACCTCTTGAC	7200
TTGT CAGGCT ATGAAGCAGC TTTGGTTAAG GCTCAGAAAT TAACAGACAA AGACAATCAA	7260
GAGGAAGTAG CTAGCGTTCA GGCAAGCATG AAATATGCCA CGGATAACCA TCTCTTGACG	7320
GAAAGAATGG TGAATACTT TGCAAGATTAT CTCAACCAAT TAAAAGATTC TGCTACGAAA	7380
CCAGATGCTC CAACTGTAGA GAAACCTGAG TTTAACTTA GATCTTTAGC TTCCGAGCAA	7440
GGTAAGACGC CAGATTATAA GCAAGAAATA GCTAGACCAG AAACACCTGA ACAAATCTTG	7500
CCAGCAACAG GTGAGAGTCA ATCTGACACA GCCCTCATCC TAGCAAGTGT TAGTCTAGCC	7560
CTATCTGCTC TCTTTGTAGT AAAAACGAAG AAAGACTAGT ATTTAGTAAA ACCTCTTAAC	7620
AAGATTACGG AAGCAGTCTC TATCTTTTCC AATGAGGTTT ATAGTACAGA AAAAGCCTGA	7680
GAAGATGTCT TCTCAGGCTT TTGTTAAGCA CATAAATACA ATAGTGCTAT GACAAAATCA	7740
CCCAGAAAA TCTGGGTGAT AAATGTTATG GTTGTGCTGG TTGAGGATTC TGATTTTGT	7800
GATCAGGGGT TGTATTTGAT TGTGCGTAT TATTGTTAGG ATTGGTAGTC GTACTATTAT	7860
TTGTGCTTGG AGTGGTTGAG CTAGACTGTG AAGTTGAACT ATCTGATGAT GAGCTTGAAC	7920
TTTCAGTTGA TGGGGGTGTG TGTGGAGCAG GTGAGTTCCA CGTAGAACGA GCACCATTTT	7980
TAAATACGAA TTCTCCATTT CTGTAGAGCC CCTCTGGTAT ATTCCAATCT TCTGGATTGC	8040
TTCTTCAGCA CAGGTAGGTC ATCATAGAGC GGTAACTTTT GGCAGCGACC GTAAGGCCAT	8100
TGCCTACAAG TGGTGTGAGA CGGTTAGAAT AGCCTGTCCA TACAGCCATT GAATATTTAC	8160
GCGTATAGCC AGCAAATAGT TCATCAGGTG CTACAAATTG AGAGGTCTTG ATGTGGTTTT	8220
CAATTTCTCT GTCTGTATAG TTAGAGGTTT CTGTTTTACC AGCCTGAGGG AGCCAAGCAA	8280
GATAGGCATT TCGTCCAGTT CCATAAGTCA AGACTGTTTT CATCATGTCG GTCATCATAT	8340
AGGCTGTCGT TTCCTTCATG GCACGAGTTC CGACATTAGA GAACTCTTTT TCACTCCCAT	8400
CACTAAAGAC GACTTTATGG ATATACATTG GTTTATAGTA AGTTCCACCA TTTGCAAAGG	8460
CAGCGTAAGC AGCAGCCATC TTTTCACTAC TTGCTCCATA TTTTTTGTCT GATTCGGTTG	8520
TGTTACTTGA AATGGCATTG GAGTAGTGAA TACTTGGGTA GTCGATTCTT AGACCATTTA	8580
GGAAAGTCTT GGC GCGGTTG AGTCCGACCT TGTTTAGAGT TTCCACGGCT GGGACGTTTC	8640
GCGATTGTTG CAGGGCGTAT TGCAAGGTGA TGTTGCCAAA GTAGCCCCTA TCCCAGTTAT	8700
AAACAGGAGT ATTTGTCCCA GGGTAGTTAT AGGGCTCATC GTGAACGATA GTAGCAGTTG	8760
AATCGTAGAC ACCGTACTCC AAGCAGGAG CATAGTCTGT GATCGGTTTC ATAGTTGATC	8820

977

CCCAGTCGCG GTTTGTTTCT ACTGCTTGGT TAATTCCGAA GGAAACATTA CTTGACTGAT	8880
GGCGTGCTCC TAGCTGGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA	8940
CTTGCAATTC ATCGTCTGGA TAGGCAACGT ATTCGTCTGT ATTGTAAATA TCCCACAGAT	9000
GTTTTGTAGC TTCTTGGTCT ACATTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT	9060
AGCCTGTTTC TTCTTCAACT TGATTGATGA CTTCTTGAG GTAATTATCC ATGTAAGCAG	9120
GGTAATTACT TGCTGATTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT	9180
TCTCATACTG TTCAGCAGAG ATGTAGCCTT GATTTTTCAT TTCAGATAAG ACCAAGTTTC	9240
GGCGGTCTTG GGCTGCTTCT GGATGTGAAT AGGGGTGATA TTGGTTTGGT GCCTGAGGCA	9300
TTCCAGCCAG CAAGGCTAAC TGAGGTAAAC TTAAATTATT GAGGTCTTTA CCATAGTAGT	9360
TTTGAGCTGC TGCTGCATT CCATAGTTCC CATTAGACAT GTAGACCTTA TTTATATAGT	9420
AGGTCAAGAT TTCTTGCTTG GTTGCTTTT GTTCTAACTG AATCGCTAAC CAAGCTTCCT	9480
GAGCCTTACC AGAAATAGTC TGGTCGGAAG TCGAAGTTGA AAAGTAAGTC AACTTAATCA	9540
ACTGTTGGGT GAGAGTTGAT CCACCTTGA GGAATTGCT TTGCAGATTG CGCAAGAAAG	9600
CTCCCAGGAT ACGGATGGTA TCAATCCCC TGTGGTCGAA GAAGCGATGG TCTTCGATAG	9660
AAACGATTGC CTTAACCAA TCTGTGGGAA TATCATTAGC TTGGGCATTG ACGCGGCGTT	9720
CAGAACCCAA GTCAGCAATG AGTTGATTTT TATTGTCGTA GATTTTACTA GAAGTTGTTG	9780
CAACTAGTTT ACTCTCGGAT AGGCTAGGAG CCTTGCTAAC GTAGTAGAAA AAACTCCTC	9840
CGCCTAAGAC AATGGCTGCG ATAACCAAGC TTAAGAAGCT AATGCTCAGA TACTTGATTA	9900
GGCGCAGAAT CGTTGGTTTG TTCATCTGT TTTACCACCT AATAAATGTT CTTTGATAAC	9960
ATTGAGATAA GGAATTTGAG GGAAGGCACC AGCCTTGATT TCATATCCAT ATTCTCGAAT	10020
ATATTCAAGT GGCATTGATT TTTGTCCCTT ATCTTGATGA TAGAAGCGAA TCAAATCGAA	10080
TGCCGGCAAT AAGTAGGTTT CTTGCTGAGA AGAAAAGTGA AGAAGGACAA AGCAGATTCC	10140
TTGTTGGGCA AGGACTTGTT CCATATGCTG AATCTGATGT GGATGAAAAT TTTTCATCGG	10200
AATCGCACGT TTTTGTTTTG TTTCTTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC	10260
GCCAGAATAG TCCGTCGTTG AAGCTTGTCG AAAATAGGCT TCAACAATCT TGGCAGGACT	10320
TCGTTGTGGA TAGTCCACTT GTACGATTTG AATAGGAGTT GGTTCCTTAT GTATAACAGC	10380
CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA	10440
GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT	10500
TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG	10560

978

CTAACTCACA TTAATTGCGT TGCCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG	10620
CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTCGCGTA TTGGGCGCTC	10680
TTCCGCTTCC TCGCTCACTG ACTCGCTGCG C	10711

(2) INFORMATION FOR SEQ ID NO: 146:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11887 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

TACATTCAATT CCATCGGCTA CTCCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA	60
CGGATACTGT AAAGTATTAT CAATTTTAAT CAAATCATCA TTACCGATAA TACTTCTGAT	120
TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAATGAAGA ATCATTAGAC	180
TCTGGACCTT TTTCTAGTGT CTCACCTACC TCATATTCTT CACCCTTACT AGAAATAACA	240
CTCAAAGCAG ATACTGTCTGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA	300
CCCAATTTTT TATAAACAGT TTTCTTCATT ATGTATCCTT CCTAATGTAA TTATAGCGTA	360
CTATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTTAAATACC	420
CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCACGCT	480
AGAGGTACTT GCTTGCTTCT TTGATACTAA GTTCAGCCAT TCTTTCCTTG TTTTCTCAA	540
TAAAGCATGT TACCCAAGTG GGATTCGTTT TGGAGTAGTC TCGCAGAGTC CAGCCAATGG	600
CTTTATTGAT AAAAAATTCT GTTTGGTTCA AGTTATGAAG GAGAATCTTT TCCATTAATT	660
GAGTATTGGT CTTCTCTTTT CTTAACAACCT GGTGGTCAAT AGCGACACGT CTCAGCCAGA	720
TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAAATCA AAGAGCAAAC TAGGAAGCTA	780
GCCGCAGTTG CTCAAAACAC TGTTTGGAGG TTGCAGATAG AGCTGACGTG GTTTGAAGAG	840
ATTTTCGAAG AGTATTAAGA TTATTTCTTC TAGTTCAGGG TGTTCATACA CCAAACCCC	900
TACTACTCGA TCTAGGATAT CTACCGTGTC CCACAAGGAT TTTGTCACGA CTAACCTGCTC	960
TAGCTTAGGC AAATCGGTTT CCTTTAGATA AGACTGCATT GCTTTCAAAT AGTTAGCAGC	1020
CACATATTGG TATTTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCAAAAT CCCAATCGAT	1080
AATCTTTGTT TTTTTCGCTT CTGGAAAATA TTTTATAGAG TTTATTTCTT TCAGGCACCG	1140
CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTCTAG	1200
AGTCTTTTGC TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCCTCTT	1260

979

GCCCCACCAA ATGGTGCTGA AAGGCATAGA CAGCCGCCTG GGTACGATCG CTGACTTCAA	1320
GTTTGGCAAG AATATTGGAC ACGTGGGTCT TGACCGTCTT GAGAGAGATA AAGAGGTCAT	1380
CTGCGATGCG CTGATTTTCG TAGCCCTTGG CGATGAGTTG GAGAACATCT CGCTCACGCG	1440
CAGTCAATTC TTCATGAAGT TCCATATGAT TGCGGTGGTA TTCAACCTTC TTGCTAACCT	1500
CTTGCTCAAT GGCCAGCTCG CCAGCAGCTA CCTTACTGAC GGCATGAAGC AATTCATCTG	1560
CACTAGAAGT CTTGAGCATA TAGCCTTTGG CACCAGCATC TAAGACTGGC ATGATTTTTT	1620
CATTGTCCAA ATAAGAGGTC ACAATCAAAA TCTTGGCTTC AGGCCATTCT TTAAGGATTG	1680
CTAAGGTGCG GTCAATCCCA TTCATCTCAG GCATGACAAT ATCCATGACA ATGACATCTG	1740
GACGCAGTTC CAAGGCCAAG TCAATCCCTT GAGACCCGTT GGACGCCTCA CCCACAACCT	1800
CTACATCGTC TTGGAGGTCA AAGTAGCTTT TCAAGCCCAA TCGGACCATT TCATGGTCAT	1860
CTACTAGTAA AATTTTCATC TTTACTCCTT TATCATTCCT TATCTAACAG GGAATACGG	1920
ATATCAACCG CCAGCCCTTG CTTGGGAGCT GTCAAGAGTT GAACTGTTCC AGCCATATCT	1980
TCAACCCGCT CCTTGATATT TCGCAGTCCA TAACTCAAGT CGTCTAAGCT CCCTAACTGG	2040
AAACCAATCC CATGTGCCAC CACCTTCAGT TGCAATTCAA CATCTGTCTG ATAGAGGTAG	2100
ACATCTAGGC AAGATGCCTG GGCATGGCGG AGGGTATTGC TAATCAACTC TTGCAGGATA	2160
CGGAAGATAT GCTCCTCGAT TTTCTTAGGC AATTTTCGTC TATTCTGCTT GAGACTAACC	2220
CTAAGATCAC TCTGTCTC AAGCTCTTT AAAAGAATTT GAATCCCTTC TATCAAGCTC	2280
TTCTGCTCCA GTTCAACTGG TCGCAAATGC AAGAGCAAAA CCCGCAAATC CTTCTGGGCT	2340
GTTTCTAAAA TAGCTGTGAC ACTCTGCAAC TGGGTCTGCA TCTTTTCTCT ATCCAATTTT	2400
AAAGCCTGCT GACTGATACC CGATAAAATC ATGTGGGCCG CAAACAATC CTGACTGACT	2460
GTATCGTGCA AATCCCGAGC AATTCGCTTC CGTTCCTTCT CGATGATTTC CTCTTCCTGA	2520
GCAAGGCTCT GATTTTCAGC TTTTGAAGA GCCTCTGTCA AAAGGTTAAG TTTACCTGAT	2580
AAGGACTTGA AACTGGCATC CAAATCTGGA TCTGCAACCT GAACCACTTC TTGCCCTGCT	2640
AATAAACGCT TGAGATTAGC CTGCATTTTT CTTAGAGAAA GCTCTTCGAT CCCTCGCCAA	2700
AACAGGGCTA AGAGACAGGT CATGGACATG CTGAAAACCA ACAATAAAAA GACAAATTTT	2760
TCTGTTTTTT CGACATCGTG CAAAAAGATA GACCAGTCAA AATCAAGTAT TTCCAGCAAG	2820
CTGTGGGAGA AAAAAAGAC AAATAGGAAG GAGGTGAGAG CAATAATGAC ATAGGCTTGT	2880
TTTTTCATCC TCTAACCACC TCCACATCAC CAATCATAGT GGTCAAGAAA ATCTTGACAC	2940
TCTTGTTACT CTTGAGATAG TCTTTTGTTT CTTGATGATA GTGTTCAATTG CGGAGGGCTC	3000

980						
GCTTGGGCTG	GTTGAAAAAA	ATCAAATCCC	CATAGAGACA	GTTAACGCTG	AGACTGACTT	3060
CCACATCTAC	AGGTACGATG	ATTTTGGTCG	TTCCTACCAT	CTTTCTGAGG	ATAATGACAT	3120
TGTCATGATT	GGTTAAGATG	ACCCTCTCCA	GATGAATAGT	GTCCTTGCCC	ATGAAGCGAA	3180
AGAGATTGAT	ATCATCGAAT	TGGCAAGTCT	GGTAGCTTGA	AAAATGATGA	AGATTTCCAA	3240
ACCAACGATT	TTTCTCCTTC	TTAACCGTCA	CGACCTCTTC	AAAAACCAA	TTGGTCTGCT	3300
CTTTTTCCTG	GTTTCATCAT	GGGTAAAGAA	GAAAGAGGCT	ATAGATAACC	GCAACAAAA	3360
TAGCTAGAAT	CACAAAAGGA	TTGAGCATAA	CGATGAAAA	GAAGAGAATG	GTTGCCGCTA	3420
CTAAAAGAAG	ATTATTTCCC	TCTTTACCAG	TGTAGTAGCG	AATCAAAAGC	AAAAAGAGGA	3480
ATAGTATCAG	CAGAAAACGC	GAAAAATGCT	CTGATACCAT	CAAAATCAGA	GCTCCTGTCA	3540
GAAGACAGGC	TTCGATAAAT	AAAAAGATTT	TAAATTTTCT	CATAGGTTCA	TCCTCTCCCT	3600
TCTATTTTAT	CACAATTCAA	AAAAGTCACC	TCAGTCTGAG	GATGGAAAA	AGGCGCTGGT	3660
TACGCCTTTT	TCATCTGATC	CTTTGCTTCT	TTTAATTTTC	CATAAAGAAG	ATAGTCTACT	3720
TTTTGTAGAT	CTGCTATGGT	GGCACAGTTA	AGGGAACACA	TAATCAAGCG	TAGATCTGCT	3780
TTCCAGCCTT	GGACAATGCC	AATCACTTCT	TCAACTGTGT	AGGTTTCAAC	CAATTCAGA	3840
ACGGTTCGTG	ACAATCCCAC	AGCCTTAGCA	CCAAAAACCA	AGCACTTAAT	CATATCCAGC	3900
GGATTCCGAA	CCCCTCCACT	AACCAAGAGT	TCGACCTTAT	CTTTCCATTG	TTGGGCATTG	3960
AGAAGGGCCT	GCATGGTAGA	CTGACCCCAT	TGATTGAGGT	AATCACGCTG	GCCACTACGA	4020
CGGTTTTCGA	TATAGGCAAA	GCTGGTGCCA	CCACGACCCG	ATAGGTCCAC	TGTACGAACA	4080
CCGAATTCAT	AGGCTCTTTC	GATTGTCTTG	GCATCCATTG	CAAAGCCAC	TTCTTTGAGG	4140
ACAATAGGAA	CGGGAATTG	CTTGCTATAA	TCTGCTAGAT	GCGATTGCCA	GCTTCTAAAC	4200
TTCTTTCTC	CCTCGGGCAT	GAGTAATTCC	TGCATGACAT	TGACATGCAC	TTGCAATAGA	4260
ACAGGATTCA	TCTCTTCTAC	AGTCTGAAGT	CCTAACTCGA	CAGGCTTGTC	CAATCCAATA	4320
TTGGTTCCAA	GGAGGAGATT	GGGATGACTA	GACTTGACAG	AAAAAGAATC	ATCCGTTGGA	4380
TTTTTGAGGG	CTGCGCTATA	AGAACCGTT	ACAAATAAAA	TACCACAGGA	TTCCGCCACC	4440
TGAGCCAGCT	TTTGATTGAT	TTCTCTTCCC	TTATTACTTC	CACCAGTCAT	GGCATTGATA	4500
TAAAAAGGAA	AGTCCCCTT	TCGACCAGCA	AACTCTGTCG	AAAGATCGAT	TTCATCCAGA	4560
TTGTAAAGAG	GCAAGGAAGA	ATGAATCAGC	TCCACCTCAT	CAAAGCTATT	ATAGGAACTT	4620
TTCTGCTCAA	GGGCATAGAG	GATATGCTCG	TCCTTACGAT	TTGTCGTCAT	GTCCTATCCT	4680
TTCTTGATAT	AAGAGCTCAA	TCCCCAGATC	GGCCCAACGA	TTTTTTAAGG	TTTTGGTTGA	4740
TTGCGCATCA	AAACTCAGGG	CGATGCCACA	GTACCACCA	CCAGCACCAC	TACTCTTGGC	4800

981

AACGGTCTGC AAATCTTGAC TGGCTTCTTT CAACTGTCTA AGCAAAGGCG TGTAATATC	4860
TGTACTCAAG CCTTCTAAAA GCTTGCTGGC TACTTCTACT TGATCGATAA TCTTTTCTGA	4920
TTTCCCTGT TCCAAGGCTT CTACCAGAGA AGTCACCGTT TCTTTTGAGG AAGTTAAAAA	4980
ATTTTGATTG ATATTTTGCT TGATTTGCTG GACCATGTGA CTCGATACAG CCACTTCCTT	5040
GGTCCATCCC ACTAAGAAAT CACATTCTAA AGTTGGTTTC ACTTGTGAAA TTGAAAAGCC	5100
CCAATCACGC TCCAGAACTG TCGCCAAGTT TTCTTCTTCT AACCAAGCAG CCACCTTCTG	5160
GCGATCAAAT GACTGGTAGA GAACCAAATC CTCTGCCACA ATACAGGCAA GGTCGCCCCAT	5220
GGAACCATG TCTCCTCGCT TAAGCAAGAC AGCGCTAGTC AGCTTGAACA AGAGCTCCTG	5280
ATCAACAGAA ACATCATACA GAGCCAGTAA AGCCTTGACA ACCAAGACAA CGACGCTGCC	5340
ACTAGAACCT AGACCAAAT TTTTCCCTTC TCGTTCCATT TTGCCACAGA TTTCTAGAGA	5400
AAAAGGTCTT AAATCTTGAC CACGAACAGC GAGGAAGTCT CCCATCAAAG CAATCGTTTC	5460
TTGAATCAAG CTATAGTCAG GATTAGGCCT TAAGTCCACT GCGAAATCAA ACATATCTGA	5520
ATAGATACGG TAGCTGTCAG AAAAAGCAAT CTCAGCCCTC ATATAGATGG GAATATCCTT	5580
TATCAAAGCT AACTGCCCTG GCTCTAAAT AGCATATTCA CCTGCCCAAT AGAGTTTTC	5640
GCAAGTTTA ACAGCAATCA TCTTGACTCA AATCCTTTGT TTTTGACACA ATCAAGCGAT	5700
AACGATGACC GAAAATTTCT GATAAATGCT CCAAGTCTTT CTCCTGACAG AAGACCTTAA	5760
CATTGGGACC AGCATCCATG GTAAAGTAGC AGGCCTCTCC TTCTCACAAG AGCTGGCGAA	5820
CAAAGGCCAT AGCCTCATAA GAGGCATCCG TCAGATAAGA AAAGGCTGGA CTAGCAGTCT	5880
TTGTCTGAGC ATGCATAGCC AGGGCATTTT TCTCCGTAA TTCTCCAATC TTGGCAAAAT	5940
CATTTTCCTT GAGATAAATC AGCATATCCT GATAGTCCTT CTCAGACTGA CGAACCCAGT	6000
CGTCGAAAGT CGTCGAGGT TCCACACAAA GTTTCATCCC GTCACGGCTA GAGATTGGTT	6060
TTTTCTTGTC CTCTAGCACC AACATAATCA TAGCTAGTTT CAAGTCTGTC TCTACAGGT	6120
AAATTTCTCC ACTATCCTTA TCCCAGGCTC CTAGTGGTCC ATAAAACTC CGAGAAGAAG	6180
AACCTGAGGC AAATTTGGCT TCCTGTGCCA ACTGACTTCT ATCCAATCCA AGCTTGAAAT	6240
AAGCATTACA AGCCTTGACC AGGGCGGACA AACCACCTAGA ACTTGAGGAC AGACCCGCTG	6300
CCGTAGGCAT ATTGTTTTGA GTATCGATAC GGACAAAGCC CTCACCAGCT GGACGATAAC	6360
GGTCAATAAT CTTACTCATC TTGGCATGCT CGACCTCATT TTGTAGCTGA CCATTGATGT	6420
AAAATTCGTC AGCTGTTACA TTGGCTGGTA AAGGCGACAA GGTCGTCTCT GTATACATAT	6480
TTTCCAAAGT TAGAGAAATA CTGCTAGTAG CAGGCACCAT CTCTTTTCT TTTTCTTTC	6540

982

CCCAATATTT GATAATAGCA ATATTTGCGT AGGAACGTAC TGTACAGGC TCTCTATCCA	6600
TGTCTGAACA GCTCCTTTCT CTTCTAATCT TTCTGCTAGT TCTTGTGCGT GTGTCAAATT	6660
GGTTACCAAG GCTATGATAC AACCTCCTAG CCCACCACCG CTCATCTTGG CACCCAGAGC	6720
ACCATGGCTA AGAGTCGTTT CAACCAAAAA GTCTGCCTCA GGGCTACTGA CTCCAATTTC	6780
TTTTAAATGT AAATGCGCTT GACTGAGGAT TTGTCCCAGT CCTTCAGCAT CTTTTGTGA	6840
AATCGCAACT TCTGCTTGCT GGGTTAATTC TCCCAAGGCA TGCAAAAACG GTAGGGCATC	6900
CTTGCCCTTA TTTGAACCA CTTGGATGGC TTCACGAGTA TGACCATAAA CACCCGTATC	6960
GGCAATCACC AAATAGGCGG ATAAATCCAT CTCAGTTTCT GTAAATCCTA CGTTCCTGAT	7020
AAAGCGAATA GGTGGTCAC TAAGACAGGT CTTAGCATCC AAACCACTAG GATTCATATG	7080
GGCAATCATT TCAGCTCGAT TGACCAAGAT TTCTAGTACA TCATGAGGCA GATCAGCCTG	7140
ATAGTAGTCA AATACTGCAC GAATGGCCGC TATGCTGATA GCCGCTGACG AACCCATCCC	7200
CCGTTTCTCA GGGATAGCCG AGTCAATCTC ACAACGAATG CAGGCTTCTG TGATATTCAA	7260
ATACTCCAGT GAGGCATAAA CCGCCATGGA CAAGGTATCC TCCTCATAAA GGCGCCAAGG	7320
ACTCTCTGCA GGAACACCT TACAGGTCAC CTCCACCTCC AAAAGAGGCA GGGAAATGGC	7380
AGGATAACCG TAAACGACCG CATGTTCCCC TATTAATAAT ATCTTACTAT GTGCCTGACC	7440
GACACCAACT TTTTTGTCA TTTTTCCTT TTAGTAGACG AAAAAACGTC TTATTTTCA	7500
TACAAGTATT AATCTTTCC TATCTATTTT ATTATATTTT CACAAAAAAA GCGATTGTTT	7560
CCATTCACAA TCGCTTCTTT CATATTGAA CCCATTCGCC ATTATAGTTG ACAGAATAGC	7620
CATCTACGGT CGTATTCAC TCCCAAGGCAC CTGAGCGCTA TAAGCGTAGT ACCATCTGCC	7680
ATTGACCTGG AACCAACCTG TCGTCATAGA ACGACGAAAG AAACCTCCATA CCATTAAGTA	7740
AAGAGGAAAG TCGTGAGGGA GCATGCGCCA TTGACAACCT GTTTTAGTGA CGTACAAAGT	7800
CTCATTAACA AGTACTCGTT TCGGCCATTT ATAGGTGCGG TGTTTGAGGA AATAGGGTTC	7860
AATCTTCGCC CATTCCTGAT CGTTTAAATC AGTATCATAT GCTTTGCGTA TCATAACTCT	7920
AGCTTAACAT TTTTTGTGA ATACAGGTTT TAAATAATCG ACCACGAAAA TTTCTTAAGT	7980
GGAAAACGCC TTATGAAGTA TGCTACGGGA AAGTTATGCA CTTAATTGA CAATTCAGA	8040
TGTAAAAATA TATACTATAG TAGATTGAAA CTAGAATAGT ACACCTCTAC TTCTAAAATA	8100
TTGTTAGAAA TCGATTTGAC TGTCTGATC GATTATCCT GTTATTATCT CATTTTACTA	8160
TAATATTTGA TAAGTTATCC TAAAAGTATT ATTATGTTGT TGTGTTATAG ATTGATTGAA	8220
TCTAACTAAA GGATCCTATT CAATTACTAG AACTATCACA TACTCAAGGT CAGCTCACAG	8280
ATGAGCAACT ATTTTGGTTA CAATGTCTAC TAAATTTAAG TCAACAAAT AATTAGTCA	8340

983

AAATTAAGGAA AATAGAGGAA CATAAATATG ATTACAAAAC AGAATGTAAT ACTGTTCTAC	8400
AATTTTACT AGATAAACT GTAAATTCTG AAGGAAGGAT CACTTCTTCA ACAGAATTTG	8460
GAAATTCGT AAGTAATTTA TCATTCCAAC ACGGAATAGC TGGACTACTG TTTCCTCTAA	8520
ATAAATTGTA CCCCCAGAA CTGGATTCTA AAATACTCTC TATCATCAAG AAGGCAGTGA	8580
CAATTAGAAC GACACACACA TATGAATATC AATACTCACT GCTATTTGGT GATGCAGGCT	8640
ATCTATGGTT ACTCCTACAT TTATTTTCTA TCAGTAAAAA TCAATACTAT CTACAATTAG	8700
CAAACGTCAC CGCTAAAAA TTAATAGAGA ATTATGATAC TCTAGAGGAA ATAGACTTTG	8760
CATTGGGAAA ATCTGGTGTC CTATTATCAT TAATAAATA CTATCAATTT ACCAATGACA	8820
ATACTCTTAA AATTTTCATC CACAATAGTA TAGGGGAAAT TTATCATTAT TTCCTACAAA	8880
GAGATACAGC CAAAGAAAGC ATTTTAGACT ATAGCTTTCG TCATGGATAT TGTGGAATTG	8940
CATATGCTTT ATTTGCCTAT TCTAAAGTCT TAGAACCTTC TATGTTTAT AATGATCTCC	9000
ATACATTCCA TACTGAATTA AAAAAATTAT TAGAAAACT TACTTCTAAT ACTGAAAATT	9060
TAGGAAATTT ACAACTTTCT TGGTGCAAAG GAATTTCCGG AATAATCTTA TATCTTTGTA	9120
TGTACGATTG TGACGGAAAC AAAGATATTA TTAGTAAATA TCAAGAATTT GTTTTAAACC	9180
ATCATCTAAA AATGATGACA GGATATTGCC ACGGAATAAC TAGCTTACTA CAAACCACTG	9240
TCTACAATCA AAACAAATTA CTGATGAAAA AAATCCAACA GGTAATTTTA GCATGTTCTG	9300
AACGAGATGA TCACGGTTTA CTGATGTTTC AAGGAGATAG TGGTAAAGCA GATTTGTTTG	9360
ACTTCGGAAT AGGAAGCATG GGGTATATTG GTGCTATTA AATAATAAAT TCCCATTGCA	9420
TGTGCAGACA TAAGGAGAAA AGTATGAAAT TATTTTGGAC AAACAACATA TATAGACAGT	9480
TGCTGCTAAA CAGCTGTTTT TCATCATTCG GCGACAGTAT TTTCTACCTC GCCATTATCA	9540
ATTATGTGGC TCAGTACAAT TTCGCTCCGC TAGCGATTTT ACTGATTTCC ATTTTCAGAGA	9600
TGGTTCCTCT ACTATCGCAA CTCTTCTCG GGATTCTAGG AGATTTTCAA GAAAAAGAG	9660
TCAAACACGC ACTCTGGATT GCCAAAATCA AAATCCTGCT CTACGCTATT TTGACAGTAT	9720
TTCTCGTCTT GTCGCCCTTT TCATTAGTTT CAGTCATTAT GATTGTCATC ATCAACCTCA	9780
TCTCTGACAC CTTGAGCTAC CTGTCTGCCT ACATGATGAA CGCCCTCTAC ATCAGTGTA	9840
TTAAGGACGA CCTGCATGAT GCCATGGGGT TCAGGCAGTC TCTGATGAGG GTTGTCCGTA	9900
TTGTGCGCAA TCTGGCTGGC GCATTCTTA TCAATGTTAT AAGTATTCAA ACTATTTCCC	9960
TTATCAACAC TCTGACTTTT GTCATTGCCT TTTTGGGCCT GTATGTTATT CGACATACCT	10020
TGTATGAGGT TGAAAAAGA ATTGAAATGT CACATACAGC ACTGAGTTTT AAGAAATATT	10080

984

TTCAACATCT TAAACAGTCG CTGGCTGTGC TCCTGAGGTT AAAAGATACC GTCATACTAC	10140
TGTTTCTGAC GACCAGTATG ATTGCCATCT TGGATGTGTC CCCTCGGCTG ATTGCCCTCC	10200
GCTTCATCCA ACAGACACTA GCACAACGA GCATTGGGCA ACTCCTCGCC CTGCTCTCCA	10260
TCATCATGTC TTGTGGAGCT ATCCTTGGCA ATATGACCAG CAGTAATCTA TTTAAAAATA	10320
TCCGTTTCAC GCACCTCTTG GTTTTCTGTG AGATTTCCTT ATTGACTCTA ATAAC TAGTA	10380
TCCTTTGTCA AGCCTATATC GTAATTTTCA TGACCAGTTT CATCAGTTCT ACGATTATCG	10440
GCATTCTCAG CCCTCGCCTA CAAGCAGCTG TCTTTGCCA TATCCCCAGT GACAAGATGG	10500
GGACGGTGGG CTCTGCTCTG AGCACAGTGG ACATTCTCGC CCCGTCCTG CTCTCCCTAT	10560
TAGCCCTATC CATAGCATCG GCGTTTCGG TGCAGTTAGC ATTGATATTT TTGTATCTTA	10620
TTTAAATTGC TCTTATCTTT TGTCATGGT TAGTCAAGTT CAACACTCAT AACTAACGAA	10680
AAAGCATGTG TAGATTTTAC ATGCTTTTAA TCTCCCAAT CGTCAGGTCA AGTACAACAA	10740
AGTCACTTCT TTGATTAAGC GAGTGTCTA ATATAATTAT AAGCGCCCTG TCATTACCGA	10800
ACCCATTCGC CATTATAGTT GACAGAATAG CCATCTACGG TCGTATTCAC TGCCAAAGCA	10860
CCTGAGCTAT AAGCATAGTA CCAGTTGCCA TTGACCTGGA ACCAACCTGT CTTTATGTCT	10920
CCATTACCTG CATTAGGTA GTACCAAGTT GAACCATCTT GATACCAACC AGTTGCCATA	10980
GCTCCTGATG AACGGAGATA GTACCATTG TTCCCAAGGT TTTGCCAACC TGTTTTCATA	11040
TCGCCATTTG GGTGGTCTAA ATAATACCAA GTGGTACCTT CCTGATACCA GCCAGTGGCC	11100
ATTGCTCCTG AGGAACGGAG GTAGTACCAC TTATTACCTA GATATTGCCA ACCTGTTTGC	11160
ATAATACCAG TTGTGGATC TAGGTAGTAC CAAGTCGAAT CATCGTTTAT CCACCCGCA	11220
CGTCTTTCAC CACCAAGGTA GTTTTCTCCA TTAATTTCCG TCTTAGCTAG ATAATACCAG	11280
TTAGACTGAT CATAAAGCCA ACCTGTCTCT AAAGAATGAT TTTGATTAAA GTAATAGTTC	11340
GTATAATAAC GCTTCTCTTC TTTATCTTCT GAATCTTCAC GTTTTTCCTT GTACTTTCTT	11400
CCAACACTGT CTTTAGTTTT AATCTCTAAT GTTTTCCAAC CAACAACTC TTGTAGCACT	11460
CCATTTTAT CGAAGTAGTA CCACTCTGAC TTTGGAAAAC CTTCTAATCT GATACCATTT	11520
GGGTAAGGAC CAATTGTACT ACCTTTAGAT GGAACGGGA TATATTGCCA GCCGACAACC	11580
ATCTCTCCAG ATAGAGAATC AAAATAATAG TACTTACCAT CAATCACTCG CCAGTAGGTT	11640
TCTTTGAGGT CCCCCTTTTT GTAGTAGGTT CTTCCGTTTT CTTGGACAAA CTGCCATCCT	11700
TCAGAAATCAT CTGCAAATAC TGTACTGGTC CTAGCAAAAC CAAAGAAAAA TACTGTCACT	11760
CCAACCTGCA TAGTTTTTTT CAAAATTTTC ATCTATATAC CCTCCAATAT TAAATCCACT	11820
CACCAGATGA GGCAGAAATTA TAACTTTTAC CATCGATAGT TTGGCTACCT GTAACCATG	11880

985

CTCCAGG

11887

(2) INFORMATION FOR SEQ ID NO: 147:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11340 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

CCGGTATGTT CTGGAATACT ACCAATCTAA GCTGGCTGTG CCCTACAGTT TTACAACCCCT	60
GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTTGGAGT CTGGTATTTC	120
AAACGCTGAT AAAATATCCG ATATTCTTT ATCAGTTTGT GAAAATATGT CTAAGAAAGA	180
CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA	240
ACAAGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACCTTCTA GTCTTTACAA	300
GTATCTAACC GAGGAGGTTG AAAACGATCA GGGGGAACCT TATTTCTATC GTAATGTAAT	360
GAAAAAAGTT TCCACCAAGA AAAAGAAAGA AACCTTGCT GCCAGAGCTG AAAATATCAA	420
GCAAAACTC TTTCTAGTG ATGAAACAGA AGGTTTCTA ACTTATATCG ATCAAGAGCA	480
CCCACAACAG CTTTCAAATC GAGCTCTCTC ATCATTC AACAAAAATAAG AACGAGATTT	540
AGCCATTATT GCCCTTCTCT TGGCATCTGG TGTTGCTTA TCTGAAGCTG TTAATCTAGA	600
TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAAACG	660
TGACTCAGTC AATGTCGCTG CTTTGTCTAA ACCTTATTTA GAGAATTATC TGGCCATTTCG	720
GAATCAACGC TATAAACCG AAAAACAGA TACAGCCCTT TTTTAACTC TCTACAGAGG	780
TGTTCTAAT CGTATCGATG CTTCTAGCGT TGAGAAAATG GTTGCTAAAT ACTCAGAGGA	840
TTTTAAAGTG CGGTAAACAC CCCATAAACT GCGCCATACA CTAGCAACTA GGCTCTATGA	900
TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC	960
TGACCTCTAT ACCCATATTG TTAGTGATGA ACAAAGAAT GCTCTGGATA GTTTATGATT	1020
TTACGTATTT TAAATTATGT AAATAAATAT CAAAAAAGA AGTTGGCCAA CTTCTTTTGT	1080
ATTTATCCAA CTACCGCTTC AGCGATTCTC TCACGGCTAA TACCAGCGAA GTAGCGTGTG	1140
ATATCAATGG TTTTATAGCG CTTAAGAACA TCTTCGCGT CGTATTTTAC CCCACGAAGG	1200
ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAAGAAGT CACCATAAAT CTTGATGTCT	1260
TGGATTTTGT ATTCAGTAAC GTTAGCAAAG ACTTCAACCT TACCACTAGT GAATTTGATT	1320

986						
CCACGACGGA	CGTTAAATTC	AGGTGATTTA	CCATAGTTCC	AGTCCCAAGT	TCCAAACTTA	1380
GTATCCTTGA	TGCGATTGAT	TTCGGCCAAT	TCTTCTTCTG	AAAAGACGTA	TTCAGTCATC	1440
TCTGGGTACT	CTTTTTCAT	GTATTCCAAG	AGTAAATCAC	GGAATTTTTC	GACTGTGATT	1500
TTTTTTGGTA	ATTCATTGAT	AATATTGGTT	ACACGGGCAC	GGACGGATTT	CACACCTTTT	1560
GATTCAAATT	TATCTTTTGA	AACCTTAAGG	GCATTTGCGA	GGACTGACAA	ATCAACGTCA	1620
AAGAGCAAGC	AACCGTGGTG	CATGATACGG	CCGTGATAT	AGGCTTGGGC	ATTGCCACAG	1680
AACCTCTTAC	CATCAATCTC	AAGGTCATTA	CGACCTGTGA	ACTCAGCTTT	AACCCCAAGT	1740
TGAGCCAGGG	TATTGATAAC	CGGAGTTGAG	AAGCTCTTGA	AGTCAAATGC	CTTATTTTCA	1800
TCTTCTTTGG	AGATGATCGT	GTAGTTGAGG	TTATTTAAAT	CGTGGTAAAC	AGCTCCACCA	1860
CCACTAATAC	GGCGAACTAC	CTCAATACCA	TTTTCGCGAA	CATAATCACG	GTTGATTTCT	1920
TCGATAGTGT	TCTGGTGACG	ACCAACAATG	ATAGATGGCT	TGTTAATCCA	AAGTAGGAAG	1980
ATTTGATCCT	CATCCAAAAG	GTGTTTAAAG	GCGTATTCTT	CCAAGGCAAT	ATTAAAAGCA	2040
GTGTCAATTG	AATGATTGAT	AATGTATTTC	ATGATATCCC	TTTACTTTAT	ATGATAGAAA	2100
CTGGAAATAA	CCTTCCAGTC	TAATCTATCT	TCGTTTTATT	TTTTCTTAGG	TGAATGGATG	2160
GCCATTCTTA	GAACATCTGC	AAACGCTTCG	TACATCACTT	CAGAGTAAGT	TGGGTGCCCC	2220
TGGATGGTCT	TCAGCATTTT	CTCAACAGTG	ATTTCCATTT	CGATGATGCT	TGATGCTTCG	2280
TTTATTAATT	CTGCGGCTGC	AGGACCAATA	ATGTGTACAC	CAAGGATTTT	TCCGTATTTT	2340
TTATCAGCGA	TAACTTTTAC	GAAACCTTGA	GCTGCGTCAG	ATGCAATAGC	ACGACCGTTA	2400
GCAGCAAAGT	TAAACTTACC	GATGGCAACA	TCGTATTTCT	CACGGGCTTG	TTCTTCTGTC	2460
AAACCTACTG	CTGCTACTTC	AGGGAGAGTG	TAGATGGCTG	CAGGAGTCAA	ATTCAATTTG	2520
GCAACTGCAT	GATTTCCCTT	AAGGGCATTT	TCAGCGGAAA	CTTCACCCAT	GCGGAAAGCT	2580
GCGTGAGCCA	ACATCTTAGT	ACCGTTGATG	TCACCTGGTG	CATAAATGCC	TGGAACTGAA	2640
GTTTCCATGT	ATTCGTTGAC	CTTGATACAA	CCACGATCCA	ATTCAAACTC	AACCTCTCTA	2700
ATACCTTCAA	GGTCTGGCAT	ACGACCAATT	GAAAGAAGAG	CTTTGCTTGC	GATGATATCG	2760
TCTTTTCCTT	CAACCTTGAT	ACGAAGTTGA	CCATTTTCCT	CAATGATTTT	TTGCAGTTTA	2820
GTACCAGTCA	AGATGGTCAT	TCCTTTACGC	TCAAGAATCA	AGCGAAGGTT	CTTAGAAACT	2880
TCCACATCCA	TAGCTGGAAC	TATACGGTCC	ATCATTTCTG	TAACAGTCAC	TTTTGAACCA	2940
AATGTCAATG	AGGCCTGACC	GAGTTCGATA	CCGACAATC	CACCACCGAT	GATAACAAGG	3000
CTTTCTGGCA	CTTCGTTTAT	TTCAAGAATG	TCATCACTAG	TCATGACAAG	TGGAGATTCC	3060
ATACCAGGGA	CGTTGATCTT	GTTGACTTTT	GAACCACCAG	CAAGAATGAT	TTTCTTGGTT	3120

987

TCAAGCAATT CAGAACCATT TACCAAGACG TTCTTGTCTT TAGTGATTGT ACCAATTCCT	3180
TTATGAACAG TAACTCCGTA GCTACGAAGA AGTCCTGCAA CACCACCAAC AAGAGTATTA	3240
ACAACTTTAG ATTTAGTTTC TAAAAGTTTT TCCATATCAA CAGTGAAGTT AGGATTTTCA	3300
ATCACGATAC CACGATTTC AGCATGACCG ATATTTTCAA TAATTTTCAGC GTTATGAAGG	3360
TAGGTCCTGG TTGGAATACA TCCACGGTTT AAGCAGGTT CACCAAGTTC AGATTTCTCA	3420
ACAAGGGCAA CCTTACCGCC GAATTGGGCA GCTTTAATGG CTGCAACATA ACCAGCAGGA	3480
CCTCCACCAA TCACAACGAT ATCAAAAGCA TCATCGCTCT TACCATCATC GTTTGAGGTA	3540
CTTGCTACAG GTACAGGGCT AGCTTCTGGC GATGCTGCTC CAGCTGTGG GATGTTTTCC	3600
CTTTCTTCAC CAAGGTAACC GATAACTTCC GTTACAGGGA CAGTTTCACC ATCTCCTTTG	3660
AGAATGGCAA TCAAGTACCC ATCTTCTTCG GCTTCCAATT CCATGCTGAC TTTATCAGTC	3720
ATGATTTCCA AAAGGATTTC TCCTTCTTTT ACAAATTCTC CGACTTTTTT ATTCCATTGG	3780
ACGATTTGTC CTTCTGTCAT ATCCACGCCG GCTTTTGGCA TAATTACTTC TAAGGCCATG	3840
TCTTCCTTCC TTTATCTATA TCTTAAAAAT GAATACTCTT GCTCTTAAAT TAACATTGAG	3900
ATTGGCGTTT CAATCAACTC TTTCAAGTCC TTCATAACT TAGCACCAGC CATAACATCT	3960
ACGACACGGT GGTCAATGGT TAATCCTAAA CTCATGATTG GGCGAATCAC AATTCACCA	4020
TTGACGACAA CTGGCTTCTC GATTGTCGAA CTGACACCAA GGATAGCTGA GTTGGGTGG	4080
TTAATAATCG GACCAAAGGA CTGAACACCA AACATTCCCA AATTACTGAT TGTGAATGTT	4140
GAATTTTGTA ACTCACTTGG AGCCAATTTA CCATCCAAGG TACGGCCAAT AACATCCTTA	4200
AAGGCTACAA CCAGTTCTGA AAGACTCATC TTCTCAGCAT TGTAACAAC AGGTGTCATC	4260
AATCCATTAT CCATCCCAAC TGCCATGGCA AGATTGACAT AGTTGTGAGT GATAATAGTC	4320
TTGCCATCTT CTGTCAATGA AGCGTTGATG TATGGGTGTT TCATAAGAGT CTTAACAACT	4380
GCAAGCGAAA GAAGGTCTGT TACAGTAGTC TTCTTCCAG TTGCTTCCAT GATTGGCTCA	4440
AGAACCTTCT TACGAAGAGC CAACATTTCA GTCATATCAA CTTCATAGTT GAGGGTGAAG	4500
GTTGGCGCAG TCAAGTAAGA TTCAACCATG CGTTGGGCAA TAACCTTACG CATTGGTGTC	4560
ATTGGAATAC GCTCGATTTT ACCATATGGT GTTACGTAT CAGGGACTTC TTCCACTTTT	4620
TCAATCTGAG CAGGAGATTT GATGCTATCG TTTTCGATAT TTTCAAGGAAG CAGGGCCAAA	4680
ACATCCTTCT TCATGATTTT ACCACGATGA CCGGTTCTT GGATTTCCTG CCAAGCAATG	4740
TTATGTTTCA GGGCAATTCG TTTTGCAAGT GGCGAAATGC GAACCACGTT TGTGTCTTTA	4800
TAAGTTTCCA CGTCTTCTT GTGGACACGA CCGTTTGCAC CTGAGCCAGA AACGTCGTAG	4860

988

AGGTTTATCC CTAAATCATC CGCTAACTTT CTAGCTGCAG GAGTCGCTCT TAGCTTGTC	4920
TCAGCCATGA CCTCTCCAAT TCTATTTATG ATACAAAGGG CGTCAAAGC GACTGAAAA	4980
TAGGAAATCG ACGATGGCTT CGATGAAGCC AAGGAGATTT ATCTTTTTTC CGATCTTTTA	5040
GCCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT	5100
TTCTCGTCAG CTTTATTTTA TTTACATAAC TTATCTTATG TAACCCTATT CTTTGTTATA	5160
AGTTTTTCGG ATTGCATCTT TGATACTTTC AACTGTTGGA ATCATTGCAT TTTCTAGGTT	5220
TTGTGCATAA GGCATCGGCA CATCTTCTCC TGCACAACGG CGAATTGGTG CATCTAGATA	5280
GTCAAATGCT TCTGATTCTG AAATAATAGC TGAATTTCA CCGATATAGC CACTTGTTTT	5340
GTGGGCATCG TTGACCAGAA CAACCTTACC AGTCTTCTTC ACTGAGTTTA TGATGATATC	5400
CTTATCAAGC GGAACAAGGG TACGTGGGTC AACAAATTTCA ACTGAAATTC CTTCTTCTGC	5460
TAATTCTTCA GCAGCTTGAA CCACACGGCG AAGCATTTTT CCATAAGTAA CAACTGTTAC	5520
ATCCGTTTCT TGGCGTTTGA TTTACCAAC CCCAAGTGGA ATTGTGTAGT CTGGATCAAC	5580
TGGCACTTCC CCTTTTGGT TAAATTCTGA CTTGTACTCA AGTATAATAA CTGGGTTGTT	5640
ATCACGGATA GAAGACTTAA GCAGGCCTTT CATGTCCGCA GGTGTTCCAG GTGCCACAAC	5700
CTTAAGTCCT GGAATGTGAG TAAACCAAGA CTCTAGAGAT TGTGAGTGCT GGGCGGCAGA	5760
GCCAACTCCG TTACCAGCTG CACAACGAAC AGTCATTGGA ACCTGACCTT TACCACCAA	5820
CATGTAACGT GTTTTAGCAG CTTGGTTGAC GATATTGTCC ATGGCAATAA CAGAGAAGTC	5880
CATGAAGGTC ATATCGACGA TTGGACGAAG TCCTGTCATG GCTGCTCCTG CTGCTGCTCC	5940
AGAGATGGCA GCTTCAGAAA TCGGACAGTC ACGGACACGT TCTGGACCAA ATTCTTCAAG	6000
CATTCCAACA GAAGTACCGA AGTCTCCTCC GAAGACACCG ACGTCTTCTC CCATCAAGAA	6060
CACATTTTCA TCGCGACGCA TTTCTCAGA CATAGCAAGG ATAATGGTGT CACGGAAGGA	6120
CATTGTTTTT GTTTCCATTT TATCTCTTTC TCCTTAGTCT GCGTAAATAT CTTCAAAGGC	6180
TGATTCAAGC GGTGGGAATG GGCTTTCCTC TGCAAATTTA ACAGAAGCTT CTACTGCTTC	6240
CTTTACTTGC GCTTGGATTT CTTCCAATTC TTCGGCACTT GCAATGTTAT TTTCAATAAG	6300
GTAATTGCGG AGGTTTTCGA TTGGATCTTT TTGTTTCCAC AATTCCACTT CTTACACGCT	6360
ACGATATTTA CCAGGGTCAG ATGATGAGTG ACCGAGCCAG CGATAAGTTA CACTTTCAAT	6420
CAAGACTGGA CCATTGCCAC TGCGAACATG GTCCACAGCT TTCTGAAATC CTTCATAGAC	6480
ATCGATGACA TTGTTACCGT CTTGATGAA CATTCCAGGA ATTCATAAG CGGCGCTACG	6540
TTGATGGATA TGTTCATAT TGGTCATTTT CTTGATATCC GCAGAGATAC CGTAACCGTT	6600
GTTAATGCAA TAGAAAATGA CTGGCAGGTT CCAGATAGAA GCCATGTTCA CTGCTTCGTG	6660

989

GAAAAACACCT TCATTGGTCG CACCATCTCC AAAGAAGCAG ACAACGATTT TACCGGTATT	6720
TTGCATTTGC TGACTGAGGG CTGCACCGAC AGCGATCCCC ATACCACCAC CTACGATACC	6780
ATTGGCACCA AGGTTCCCAG CATCAAGGTC AGCGATATGC ATAGATCCAC CTTTCCCTTT	6840
ACAGGTTCCA GTGTATTAC CAAGGATTTC AGCCATCATT CCGTTGAGGT CAATCCCTTT	6900
AGCAATAGCT TGCCCGTGC CACGGTGGTT TGAGGTAATC AGATCATCTG GATTGAGAGC	6960
TAACATAGCC CCCACGTTAG CTGCCTCTTC ACCAACAGAA AAGTGCCTCA TTCCTGGCAC	7020
TTTCCCTTTC TTTACTAATT GTGCAATTTT TAAGTCCATG CGACGGATTT CTTCCATCTT	7080
ACGGAACATT TCTAGCAAAA GATTTTATC TAAAGTTGAC ATCTTCTTGC CTTTCTAACT	7140
TTCTTCTTAC CTACTATTT TACCGCTTTT GGCAAATACT GTCAAAGTTT TTCTAAAAGA	7200
AATTTACAAA AATAAAAAAG AAAACCCCGT GAAACAAGG GATTTTCTTG TCAAGAATAT	7260
TTTTTCACAA ACTTTTTAGC ATTTGGATTT TGCTAAAGAT TCAAATCTCT TCATAATCAC	7320
AGTTAAACGC CAACGGTAGA GCGCCCGCT CACAATCAAA CTAATAATCA AGCCGATCCA	7380
GTAAGAATAA GCTCCAAAAT CTGTTAGGGA ATCAAATAGC GTAAACACAGG GATTGCTACG	7440
CCCCAATAAC CAAGCAAACC AAGGTAAAA GGAATAACTG TATCCTTATA CCCCCGAAA	7500
ATTCCCTGAA GCGGCGCCGC AAAGGTATCT GCTAACTGGA AGAAAAGACT ATAAGTTAAA	7560
AAACGCACTG TCAAATCGAT AAATTTTGGG TCGTTACCAT AAAGACTGGC CACATTTCCC	7620
CTAAAAATGT AAAGGAAGGT TAAGGTGAAG GCCGCAAAAA TGAGGGCAGT CCATCTTCCT	7680
AGACCAATAT AGGTTTTCGC ATCATCAAAT CGTTGGCTC CCACTTCATA GGAAACGACA	7740
ATAGCCATAG CCGATGAGAT ACTCATAGGA AAGGCGTACA TAAGACTTGA AAAGTTCATA	7800
GCTGACTGGT GACTAGCTAT AATCAAGGGC GAAAACTTAG CCATAATCAA GCCAACCCT	7860
GAAAAGATAG CCACTTCCGC GAAGACAGTT CCCCCAATAG GCAGACCTAA ACGAACTCCT	7920
TCCTTAATTT TATCCATATT AAGTGAATT CGTTTCTCAA GGTGTAAGGC TTTGAGCTTC	7980
TCCTGTTTAA ATAAAACCAG AACAGAAATC CCAAGCAAGA CCCAGTAGGC CAAGGATGTT	8040
CCTAAACCAG CACCAGCCCC TCCCAGTTCT GGAACACCAA AGGCACCGTA AATCAAGAGA	8100
TAGTTAAATC CGCTATTGAG AGGGAGTAAC AAAAGCATGA GGTACATGGA CAGTTTGGTC	8160
AAGCCCAGCG AATCCAGCAA GGAACGAATG ACGCTAAAGA GCAACAAGGG GATAATCCCG	8220
ATAGATAAAA ACCAAAGATA GCGAACCCT ACTGCCGCTA CTGCTGCTTC TAACCAATA	8280
TGATTCAAGA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAC AGATAGGCCC	8340
AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCTTTTTC GCCTCGACCA	8400

990

AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAATCC CTGTTAGAAA TGTAAAGAAA	8460
GGATTCCAGA TACTGGTTGC CATAGATACA CCAGCCAAGT CCATAGTGTT GTATTGACCT	8520
GTCATTGCAG TATCAACAAA AGAGGCAGAA TAATTGGCAA ATTGGTAGAT CAGGATTGGG	8580
AAGAAAATTT TAAAAATAA TACTAACTTC TCTCGTAAAC ACTTTGTCTT ATACATACTT	8640
CTCTTTCTAT TCTGATTAT CTAACCCAAA GAGTTTCAGA CCATAGTTTT TCAAACCTAG	8700
CGGAGGTTTA TTAGATTTTG AAGTAGTAG CCAACACGCA CATGTACGAC AATAATAGCT	8760
TCTAACTAAA CCTCCGTTAT CATATTGAAC CGCATGGTCA GCTTTTTCTT TAGTTTCATA	8820
TTGAATTTTG GAACGATTAG CTGCGGGACA GTAAATTCCA CTATTAGATT TCGCTTGTCT	8880
CTCCCTACGT TTTCGAAAAT AATTCATATT CTAACCTCCTA TCAAGCTTGA TAGACGATTT	8940
GTCCCTTACA GATGGTATAT TTAACCTGCC CTTTAAAGGT TTCACCGATG AATGGTGAAT	9000
TAGCTGCTTT GGAAGCAAAA TGGGAGTCCA CAAAGCGGTC AGCCTTGGCA TCAAAAATAG	9060
TGATATCTGC TGGACCATTG TCAGCCAAGT AACCTGCTTC AAAGTTGTAA AGCTTGGCTG	9120
GGTTGTATGT CATTTTTTCA AGTAATTCCA TCAAGCTCAA CTCACCAGCT TCTACTAAAT	9180
AGGTCAAGCT GAGAGACAGG GATGTTTCTA AGCCAGTCAT ACCAGATGGC GCTTTGGTAA	9240
TATCCTCAAC ATTTTTTTCA TCTACATGAT GAGGCGCGTG GTCAGTCGCA ATAAGTGTGA	9300
TGACACCTGA TTTGAGACCT TCGATAACGG CACGACGGTC TGATTCCAAA CGAAGCGGTG	9360
GATTCACTT AGCATTGCTA CCTTGTGTTA AAAGAAGTGC TTCTGTCTTA GAGAAATGCT	9420
GTGGCGCTAC TTCTGCTGTG ACTTCTGCAC CTAACCCCTG AGCAAACCTCC ACTACTTTAA	9480
CACTTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGTTGCA TAGGCAATCA	9540
TGACATCAG CGCCATCATA GCGTACTCAG CCACCCAGT AGCACCGCAG ATATGGAAAT	9600
GTTCTCTAGC AATATTTTCA TTAAAGCCAA GAACACCGTT CAAACCTGGA TCTTCCTCAT	9660
GAAGGCTGAT AAAGGTATTG AGTTTTTTGG CTTCCTCCAT GGCTTCCTTG ACAATCTTAC	9720
TGCTCTCAAG CGGAATACCG TCATCAGAGA AACCAACCGC ACCAGCTTCT AAGAGTGCCT	9780
TAAAGTCAGT CAAGTTTTTA CCATTAAAGT TTTTAGTAAT GGTGCAACT GTCTTGACAT	9840
TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCACG TCTGAAATGG	9900
TTGGACTGGT ATTAGCCATC ATGACGACAG TAGTAAACC ACCTGCAGCG GCTGCTAGGG	9960
CACCAAGTATG AATGTCTTCT TTATGTGTTT GACCAGGTTT ACGGAAATGA ACATGAATAT	10020
CGACCAAGCC AGGAGCAACC ACAAGACCAG TAGCATCAAT CGTTTCTGCT CTTTCTTCCG	10080
TGATCTCAGA CGCAATTTTG ATAATTTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT	10140
CCAAACCAGA CTTGGGATCC ATTACACGAC CATTTTGTAT TAGTAGCATC TGCTTTCTCC	10200

991

TTTATTCATA GAAATCAACT TGGGTATCCA ACAATTTATC CCCATCATAA ACAAACCTGG	10260
CTGAAAAGAA GGGTTTATCC TCTAAAAGCC ACTCAACAAA GGTGTGGTCA CCTTCCCAAG	10320
TCGGCTTGCT CAAAACCTCA TCATAGGGAA CCCATTCTAG CGTCCCCTCA TTGCAGTCAA	10380
TCAAGTCGCC CTCAAACCTCC GTCACCTTAA AAACATAGGT GTACCAGTCT AAATCTGGTG	10440
TAAATTCAGG AAAAGTGATG ACACCTTTTA GAACTGGCTT GGCTTTGAGC CCTGTTTCTT	10500
CAAGGATTTC ACGCGCCGCG CATTCTGGG GCGTCTCTCC TCTCTCTAGC TTACCACCCA	10560
CACCAATCCA TTTCCCTTCA TGGACATCAT TGGGTTTCTT ATTACGATGG AGCATGAGCA	10620
GTTCCTTCCC ATTATCAATG TAGCAAATCG TCGCTAACTG AGGCATATTT TCTCCTTATC	10680
TAAGCCAATC GATTGGCTCT TGTCTGTCT CTTTAAAGAA TGCATTGGCC TTGGAAAAGG	10740
GCTTGGAACC CAAAATCCT CTATAAACCG ACAAAGGACT TGGATGGGCT GATTGATAA	10800
TCAAGTGATG AGGATTGGTA ACTAATGCCT TCTTCTTACG TGCATAAGCT CCCCAGAGTA	10860
CAAAAACGAC TGGTCTATCT AGATGATTGA CCACCTGAAT CACAGCATCA GTAAAAGGCT	10920
CCCAGATTG ACCAGCATGA CCATTGGCCT GTCCAGCAGG AACAGTCAA CAAGCATTAA	10980
GAAGCAAGAC TCCTTGCTCA GCCCAAGCTG TCAAATCATG AGATTCTTCTTA ACTCCGATAT	11040
CATCTGACAA TTCTTTCAAG ATATTTTGCA AGGATGGTGG AGCTGGGATA GAGTCAGGTA	11100
CAGAAAAACT CAAGCCCTGC GCTTGACCTG GTCCGTGATA GGGGTCTTGC CCTAGAATTA	11160
CCACCTTAAC TTCTTCAAGC AGTGTGTGCA AGAGAGCCTG AAAAACCTTT TCCTTGGGTG	11220
GATAAATAAT CCCCTGAGAA TAGACCTGCT CCATAAACTG ATTGATTTTC CCGAAATAAC	11280
CCTCAGGTAA TTGCGCCTTA ATCAAAGCAT GCCAAGACGA GTGTTCCATA GCCGACTCGG	11340

(2) INFORMATION FOR SEQ ID NO: 148:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12127 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

AAAAAATAGA CTTGTTAGAC TATAAATGTA GTAAGCCTAC ACAAGAAAAA TACATAGAGA	60
TAAAGGTGAT TATTATGAAA TTCAAAAAAA TGCTTACTCT TGCAGCCATT GGCTTATCAG	120
GATTTGGGCT TGTTGCCTGT GGCAATCAGT CAGCTGCTTC CAAACAGTCA GCTTCAGGAA	180
CGATTGAGGT GATTTACGTA GAAAATGGCT CTGGGACACG GGGTGCCTTC ACAGAAATCA	240

992

CAGGGATTCT CAAAAAAGAC GGTGATAAAA AAATTGACAA CACTGCCAAA ACAGCTGTGA	300
TTCAAAATAG TACAGAAGGT GTTCTCTCAG CAGTTCAAGG GAATGCTAAT GCTATCGGCT	360
ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG	420
CTAGTCGAGA CACAGTTTTA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATTGTTT	480
GGTCTTCTAA TCTTTCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG	540
GTCAACAAGT GGTACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA	600
CAAGCCAACA CTTATCAGGC AAGTTGTCTG TTGTAGGTTT CACTTCAGTA TCTTCTTTAA	660
TGAAAAAAT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT	720
CTAATGGGTC TTCAGCAGGT ATTACCGCTG TTAAGGAGAA AACCGCTGAT ATTGGTATGG	780
TTTCTAGGGA ATTAACCTCT GAAGAAGGTA AGAGTCTCAC CCATGATGCT ATTGCTTTAG	840
ACGGTATTGC TGTGTGGTC AATAATGACA ATAAGGCAAG CCAAGTCAGT ATGGCTGAAC	900
TTGCAGACGT TTTAGTGGC AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT	960
CCATAATCT CTAAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA	1020
GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAACAAG	1080
CCTTCAAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTGTTGTAG	1140
CTATTTTGCT AATCTGTTTC TTTATTTTTA GTAATGGCTT ACCTTTCATA GCTAACTACG	1200
GCTTTGCCCG TTTTATTTA GGCAGTGATT GGTGCCAAC GAACATTCCG GCAAGCTATG	1260
GTATTTTACC AATGATCGTT GGTTCCTTAT TAATTACCTT AGGAGCGATT GTGATTGGGG	1320
TGCCAACAGG CATCTTGACA TCGGTGTTTA TGGTTTATTA TTGTCCAAAG CCGTCTATG	1380
GCTTCTTAAA ATCAGCTATC AACTTGATGG CAGCCATTCC ATCTATTGTT TATGGTTTTT	1440
TCGGCCTACA ATTATTGGTG CCTTGATTA GAAGCTTTTT AGGAAATGGC ATGAGTGTCC	1500
TAACCGCTTC GTTACTATTA GGAATAATGA TTTTGCCAAC CATTATCAGT TTGTCAGAAT	1560
CTGCTATCCG AACAGTTCCC AAAACGTATT ATTCTGGTAG CTGGCTCTA GGAGCTAGTC	1620
ATGAACGGAG TATTTTTAGT GTCATCTTGC CAGCTGCGAG ATCTGGTATT TTATCAGCAG	1680
TTATTTTAGG AATCGGTCGC GCAGTAGGTG AAACCATGGC AGTTATTTTG GTGGCAGGCA	1740
ACCAGCCGAT TATCCAAGT GGACTCTTTT CAGGAACCAG AACCTTAACA ACCAATATTG	1800
TTCTGGAAT GGCTTACGCA TCAGGTCAGC ATAGGGAAGC CCTTATTGCA ACCTCAGCAG	1860
TTCTCTTTTT CCTTATCTC TTGATTAATG CCTACTTTC CTAATTGAAA GGAAATCAT	1920
CTTATGAGTA AATACCTGCT AAAACTTCTC GTTTATTGTT TTTTCTTTT AACCTTTGGC	1980
TCTCTTTTT TAATCATGGG TTTTATCCTC ATCAAAGGCT TACCTCATCT AAGTCTATCC	2040

993

CTCTTTTCTT	GGA	CTTATAC	TTCTGAGAAC	ATTTCCCTTA	TGCCAGCGAT	TATTTCCACC	2100
GTATTTCTGG	TCTTTGGTGC	TCTTCTTTTA	GCCTTGCCCA	TAGGGATTTT	TGCTGGTTTT		2160
TATCTTGTGG	AATATACAAA	AAAAGATTCC	CTTTGTGTTA	AAATCATGCG	ATTGGCCTCA		2220
GATACCTTAT	CTGGGATTCC	TTCCATFGTT	TTTGGTCTGT	TTGGCATGCT	CTTCTTTGTA		2280
GTCTTCTTAG	GTTTTCAATA	CTCTCTGTTA	TCAGGAATCT	TAACCTCAGT	TATCATGGTG		2340
TTGCCAGTCA	TTATTCGCTC	AACAGAAGAA	GCCCTTTTAT	CTGTTAGTGA	TAGCATGCGT		2400
CAAGCAAGTT	ATGGACTTGG	GGCAGGTAAG	TTACGGACTG	TTTTTAGAAT	TGTTCTACCA		2460
GTGGCCATGC	CAGGTATTTT	AGCTGGAGTG	ATACTAGCTA	TTGGCCGTAT	CGTTGGTGAA		2520
ACAGCTGCCC	TCATGTATAC	ATTAGGTACC	TCTACCAATA	CGCCAAGTAG	TCTCATGTCT		2580
TCAGGCCGTT	CTCTAGCCCT	ACATATGTAT	ATGCTGTCAA	GTGAGGGGCT	ACATGTCAAT		2640
GAAGCCTATG	CTACCGGCGT	GATTTTGATT	ATTACTGTTT	TAATGATAAA	TACTCTATCA		2700
AGCTTATTAT	CTCGAAAAC	TGTGAAAGGA	GCTTCCTAGT	ATGGGAACAT	TTTCAGTCAG		2760
ACACCTAGAC	TTATTTTACG	GGGATTTTCA	AGCCTTAAAA	AATATTTCGA	TTCAATTACC		2820
AGAAAGACAG	ATTACTGCCT	TGATAGGCCC	ATCTGGTTGT	GGCAAATCAA	CTTTTCTAAA		2880
AACCCTTAAC	CGGATGAACG	ATTTGGTTCC	TTCTTGCCAT	ATTGAAGGCC	AAGTCCTCTT		2940
AGATGAGCAA	GATATTTATA	GTAGCAAATT	CAACCTTAAT	CAGCTACGTA	AGCGTGTAGG		3000
GATGGTTTTT	CAACAGCCTA	ATCCCTTTGC	CATGTCTATC	TATGATAACG	TGGCTTATGG		3060
CCCAAGGACA	CATGGTATTC	GAGACAAAA	ACAATTAGAT	GCCTTAGTGG	AGAAATCTTT		3120
AAAAGGGGCA	GCCATTTGGG	AAGAAGTCAA	AGATGATCTT	AAAAAGAGTG	CCATGTCTCT		3180
ATCTGGCGGT	CAGCAGCAAC	GCCTTTGCAT	TGCGCGAGCT	TTAGCAGTAG	AACCTGATAT		3240
TCTGTTAATG	GATGAGCCGA	CTTCAGCCTT	AGACCCTATC	TCCACTTTAA	AAATTGAAGA		3300
CCTCATTCAG	CAACTAAAA	AGGATTATAC	GATTATCATT	GTTACCCATA	ACATGCAACA		3360
AGCTTCACGT	ATTTTCAGATA	AAACTGCTTT	TTTCTTAACA	GGAGAAATTT	GCGAATTTGG		3420
AGATACCGTT	GACGTGTTTA	CCAATCCAAA	AGATCAGCGC	ACAGAAGACT	ATATTTTCAGG		3480
ACGGTTCGGA	TAAGGAAGGA	AAAACCTATG	AGAAATCAAT	TTGACTTAGA	ATTGCATGAA		3540
TTAGAACAAT	CCTTTTTAGG	ACTAGGGCAA	CTTGTCCTTG	AAACAGCTTC	AAAAGCCTTA		3600
CTGGCCTTAG	CCTCCAAAGA	CAAGGAGATG	GCAGAGCTAA	TTATCAATAA	GGATCATGCT		3660
ATCAACCAAG	GTCAAAGCGC	TATCGAATTG	ACCTGTGCCC	GTTTGTGGC	CTTGCAGCAG		3720
CCACAAGTGT	CTGACCTTCG	ATTTGTGATT	AGCATCATGT	CTTCTTGTTT	AGACCTTGAA		3780

994				
CGTATGGGAG	ACCATATGGC	AGGCATTGCC	AAAGCTGTTT	TGCAACTAAA AGAAAATCAA 3840
CTAGCCCCCTG	ACGAAGAACA	GTTACACCAA	ATGGGTAAAT	TATCCCTCAG CATGCTAGCC 3900
GATTTATTGG	TTGCCTTTCC	TTTGACCAA	GCCTCAAAAG	CTATTAGTAT TGCTCAAAAA 3960
GATGAACAGA	TTGACCAATA	TTATTATGCC	TTATCAAAGG	AAATCATTGG ACTTATGAAA 4020
GACCAAGAAA	CCTCAATTCC	CAATGGAAC	CAATACCTTT	ATATCATAGG GCATCTGGAA 4080
CGCTCGCTGA	TTACATTGCT	AACATTTGTG	AACGCCTAGT	CTACCTAGAA ACAGGAGAAC 4140
TAGTGGATTT	GAATTAATTC	AACTAATCCT	TAAAAGAGAA	GAGTACGATT AAGTACTCTT 4200
TTTTATGGTT	GTAAAAAGT	TCATTTGACC	AATTAAAGCA	GTGTAGATAG TGAGGAGTTG 4260
TTTCAATTCT	ATCGTGAACG	AGGGAATGCT	GAAGAACTTTA	TCAAAGAAAG GAAAGCAGGA 4320
TTCTTTGGGG	ATAAGACAGA	TAGTTCGACC	ATGATTAAGA	ATGAAGTACG TATGATGATG 4380
GGCTGTCTGG	CTTATAATCT	CTACCTCTTT	TTAAAGCAGC	TAGCTGGTGA TGAAGTAAAG 4440
TCCTTGACTA	TCAAGCGTTT	TCGACGTCTC	TTCTTTCATA	TGCGCGGAAA ATATGTCTCT 4500
ACTGCTAGAC	GACATATTCT	CAAAATCTCA	AGTCTATACG	CCTATTCAAA ACAGTTTCAA 4560
GCCTTATTTG	ATACAATCTG	CCAGATAAAT	CTGATACTCC	CTGTTCCATA TAGAGCTAGA 4620
GGGCAGGGGA	AAACATGCCT	AACAGAATAA	GTCACCTTAT	TTTAAAAATC GAGCATCAAA 4680
CCAAGGGAGG	AGTCTGCCCT	TTTTTAGGAA	AAAATCAAGA	CAAATCTCCT CAATTATGTC 4740
TCGAACATCA	GAAATTAAGC	AAAATCACCA	GAAGGACAGT	ATTTCAACTA GCTTTTCTGG 4800
TAATTTTGA	ACTGTGTAGT	TCGTTAGTGC	CAGATATGAA	TAATTTGGGA TGATAAATCT 4860
TTCTTCCTCA	GGTAGCCTAT	CATAATACTC	TTCAAAAATC	TTATCAAAAA CACTCTCTTT 4920
CTTTTGGGCG	ATAGTTTCAT	CTTCGTATGT	AGGAGTCCTC	ATCAAGAAAT ACTTCAATTC 4980
TAGGTATTCC	TTATCCAACT	CTATATAACT	TGGCATCAAC	TTGTAATCTT CAACCCCAA 5040
ACGTTCAAGCA	ATATATTTTA	ACTTTGTTAG	TATTGGTCTG	GATTCTCCAT TTTCAATTCT 5100
AATTAATTGA	CGGATACTTA	ATTCAGACTC	ATCACCACAA	AATTCTGAAC GACTGATTI 5160
TTTAGCCAAA	CGTAATCTTT	TAATTTTTTC	GCCAAACTCT	CGCAACCTAC AAGAACTTCC 5220
TGAGTTGTTT	ACCTCTATTA	TAAGCATATA	CTGAATCAAA	CTATCTATCA GATTTCTTCT 5280
CACTTTAACT	AAAGACTAAG	AGTTTATCCC	TTCTGTCTCG	TTTTTGTGTA TTTTCCACC 5340
ATACCCAGT	AATGCAAGTG	CAAAATCCCC	TAGAATATGA	TAGAATAAGA GAAAGAACTC 5400
TATCAAGGAG	GAAATCATGG	AAAAACAAAC	CGTCGCCGTC	TTGGGGCCTG GTTCTTGGGG 5460
AACCGCCCTT	TCACAAGTCT	TAAATGACAA	TGGACACGAG	GTACGTATTT GGGGAAATCT 5520
TCCCGAGCAA	ATCAATGAAA	TTAATACACA	CCATACTAAT	AAGCACTACT TTAAAGATGT 5580

995

CGTTCTAGAC GAAAATATCA TTGCCTACAC CGACTTAGCA GAAACATTGA AAGATGTGGA	5640
TGCGATTTTG TTTGTTGTCC CAACAAAAGT GACACGACTT GTTGCCCAAGC AAGTTGCACA	5700
AACCTTGGAC CATAAGGTTA TCATCATGCA CGCATCAAAG GGATTAGAAC CTGATAGCCA	5760
TAAACGATTA TCAACCATTG TTGAAGAAGA AATTCTCGAA CATCTCCGTA GTGATATCGT	5820
CGTTGTTTCA GGGCCTAGTC ATGCAGAAGA GACCATTGTG CGTGACCTAA CTTTAATAAC	5880
TGCTGCTTCT AAAGATTAC AAACAGCTCA ATACGTTTCTG AAGCTATTTA GTAATCACTA	5940
CTTCCGACTT TATACCAATA CGGATGTTAT CGGGGTTGAA ACTGCTGGTG CTCTTAAAAA	6000
TATATTGCT GTCGGTGCTG GAGCTTTACA TGGTCTTGA TTTGGTGATA ATGCTAAGGC	6060
AGCCATCATC GTCGAGGTT TAGCAGAAAT CACCCGCTTA GGGGTAGCAC TCGGGGCCAG	6120
TCCATTGACC TATAGCGGCT TATCTGGTGT GGGAGATTTG ATCGTAACGG GAACTTCCAT	6180
CCACTCTCGT AACTGGAGAG CTGGAGATGC TCTCGGACGA GGAGAATCCC TAGCTGATAT	6240
AGAAGCTAAT ATGGGCATGG TAATCGAAGG AATTTCACG ACTCGAGCAG CCTATGAACT	6300
AGCCCAAGAA CTGGAGTCT ATATGCCCAT TACACAGGCT ATTTACCAAG TTATTATCA	6360
CGGAACCAAT ATCAAAGATG CCATTTATGA CATCATGAAC AATGAATTTA AAGCAGAAAA	6420
TGAGTGGTCT TAACCCTCTA TAGAAAGGAT TTTTATGACA TCAAAAAGTTA GAAAGGCAGT	6480
CATCCCTGCT GCTGGACTAG GAACTCGATT TTTACCAGCA ACCAAGGCC TTGCCAAGA	6540
AATGTTGCCA ATCGTAGACA AACCAACTAT CCAGTTTATC GTGGAAGAAG CTCTCAAATC	6600
AGGTATTGAA GATATTCTAG TTGTCACTGG TAAATCAAAA CGTTCTATTG AGGACCACTT	6660
TGATTCAAAC TTCGAATTGG AATATAACCT CAAAGAAAAA GGGAAAACAG ATCTTTTGAA	6720
GCTAGTTGAT AAAACAACG ACATGCGTCT GCATTTTATC CGCCAAACTC ATCCACGCGG	6780
TCTCGGAGAT GCTGTTTTGC AAGCCAAGGC TTTCTCGGA AATGAACCTT TTGTCGTTAT	6840
GCTTGGTGAT GACTTGATGG ATATCACAGA CGAAAAGGCT GTTCCACTTA CCAAACAAC	6900
CATGGATGAC TACGAGCGTA CCCACGCGTC TACTATCGCT GTCATGCCAG TCCCTCATGA	6960
CGAAGTATCT GCTTACGGGG TTATTGCTCC GCAAGGCGAA GGAAAAGATG GTCTTTACAG	7020
TGTTGAAACC TTTGTTGAAA AACCAGCTCC AGAGGACGCT CCTAGCGACC TTGCTATTAT	7080
CGGACGCTAC CTCCTCACGC CTGAAATTTT TGAGATTCTC GAAAAGCAAG CTCCAGGTGC	7140
AGGAAATGAA ATTGAGCTGA CAGATGCAAT CGACACCCTC AATAAAACAC AACGTGTATT	7200
TGCTCGTGAG TTCAAAGGGG CTCGTTACGA TGTCGGAGAC AAGTTTGGCT TCATGAAAAC	7260
ATCCATCGAC TACGCCCTCA AACACCCACA AGTCAAAGAT GATTGAAGA ATTACCTCAT	7320

996

CCAACTTGGA AAAGAATTGA CTGAGAAGGA ATAACAAAAT CATTTATATA AAGATTAGCC	7380
ACACATAAAT TAAGTAAATT CTCTACTTGA ATCTACCTAT TTAATAAAAA CTAATGAAAA	7440
CGCTATACTT GTATTTGTTT TTTCATTAAA ATAAGAGTAG AATAAATTAG TATAGTAAAA	7500
CAAAAAAGCA CCGAATCGGT GCGCACTTTT TCAAGTTGTG TACGGACAAA GCCTTATTTT	7560
AACCTTGCTA TGTGTGTTCT AATGGTTCCA AAATAATAAA TAATTTTAAA TTTGACTTAA	7620
CTGTTGGAGT AGTCATGGTT AAATTAAATC AACCGAGCCG AACATAAGTT GTTTAATTTT	7680
GTGGAAGCTA TTAATAAAAA TATAATAAGG GAGAAAAGATA GGTGTAATTT TAATTTTAAA	7740
GTAATTGCGG ACACTATCAA AGAAAAAGAT TATGGAGAAC AAATTTGTAG AATTTATCGA	7800
AAACAATAAA AAAGTAATCA TTTCATCAGT TGCAGTTGGT GTTGTATTGG TATTAGGGTT	7860
TGGATGGTAT TCATATAACC AACACAAGC AGAACAACAA GCAAAAATTG TACAATTAGA	7920
AAAAGATAGC AAATCAGACA AAGAACAAGT TGATAAACTA TTTGAATCAT TTGATGCATC	7980
TTCAGATGAA TCTATTTCTA AATTAAGA ACTATCTGAA ACTTCACTTA AAACCGATGC	8040
AGGTAAAGAC TATCTTAATA ACAAAGTCAA AGAATCATCT AAAGCAATTG TAGATTTTCA	8100
TTTGCAAAAA GGTTTGGCTT ATGATGTTAA AGATTCAGAT GACAAATTTA AAGATAAAGC	8160
AACTCTTGAA ACAAATGTAA AAGAAATTAC AAAACAAATT GATTTTATCA AAAAAAGTTGA	8220
TGAAACTTTT AAACAAGAGA ATTTGGAAGA AACTCTTAAA TCTCTAAATG ATCTTGTTGA	8280
TAAATATCAA AAACAAATCG AACTTTTGAA GAAAGAAGAA GAAAAAGCTG CTGAAAAAGC	8340
TGCTGAAAAA GCAAAGGAAT CTTCTAGTCA AAGTAATCT TCTGGTAGTG CTTCTAATGA	8400
GTCTTATAAT GGATCTTCCA ATTCAAATGT AGATTATAGT TCATCTGAAC AAATAATGG	8460
ATATTCAAAT AATTATGGCG GTCAAGATTA TTCTGGTTCA GGAGATAGTT CAACAAATGG	8520
TGGATCATCA GAACAATATT CATCTAGCAA TTCAAACAGC GGAGCAAATA ATGTCTACAG	8580
ATATAAAGGC ACTGGTGCTG ACGGCTATCA AAGATACTAC TACAAAGATC ATAATAATGG	8640
AGATGTGTAT GATGACGATG GAAATTACCT TGGGAACTTT GGTGGCGGCA TTGCAGAACC	8700
TAGTCAACGC TAATAACTAT TTTAGAGCTG TGTGTTTCG AATGGTTCCA AAACACATTA	8760
AAAGCTACTC ATTTTTTAAG TAGCTTTTTT CTTATTCAAG TTTACATATT ATACTCAATG	8820
AAAATCAAAT TCAAACCACG TCAGCATCGC CTTACCGTAG GTATGGTTAC TGACTTCGTC	8880
AGTTTCATCT ACAACCTCAA AACCATGTTT TGAGCTGACT TCGTCAGTTC TATCTACAAC	8940
CTCAAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCCTA GTTTGCTCTT TGATTTTCAT	9000
TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCCTACGA	9060
ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTATACAT CCGTTTTTCT CCTCTAACTG	9120

997

GAAAGATAAC TGCTAGAAAT GCGCCACCAA CTGCACCACC GATATGGCCT GCTAGGCTGA	9180
TTCCTGGAAT CAGAACACTT CCAATAATGT TAACCACAAA AAGTGTCAGA TAGGATTGCC	9240
CTAGCTGTTG GATATAAGGA TTGCGAGTTG CATAGCGAAG AACATAATC GCGGCAAATA	9300
GCCCATAAAG AGAGGTAGAG GCGCCTGCTG CTAAGGATTT AGGACTAAAT AAAAAACAA	9360
AGAGATTGCC CATCATTCCT GATAAAAGAT AGAGAAAGAA AACTGCTTA GAACCGAAAA	9420
TCTCCTCTAC CTGCCTTCCA AGATAATAAA GTGAAAGCAT ATTAACAATG AAATGTTCCC	9480
ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAAAC CTGCTCGGGA AAGAGGCGAA	9540
TAGCTGGCCC ATACATGGCT CCAAATCGAA ATAATGTATC TGCCCTGTCA AAGTTTCCGC	9600
CTGCAGTGAC CAACATTAGT AAAAATACCA AGGCCGTCAC TAAGAGGAAG AACTCGTCA	9660
CAGGGTAACG TCTATCAAAG ATTTCTTCA TCAATTAATA CCTCTGAAC AGGAATATCA	9720
TGGTTTTTCA GTATAAAGTC CTGAATTTGA CAAGGATATA TCGTACTCAA AGTACGACCA	9780
GAAAAATGTT CCAGATAGCG GTCATAATAG CCTCCACCGT ATCCTATCCG ATATCCTTTC	9840
GTCGTAAGG CCAGACCAGG AACATGAATC AAATCAATCT GAGATGCATC CACCCTTCC	9900
AAATCTCCCT GTAGCTCCAG TAAGGCAAAG AAAGTTTTTA CCAACTGTTG CGGATCATAG	9960
ACCACAAAGT CCATGCGCCC CTTGGGATAA GTTTTGGGTA TTAACCTT CTTGCCGTCC	10020
TTCAGCGCCT GCTCAATCAG TTCCTGCGTT TGAAACTCAT GAGAAAAAGA GAGGTAGGTT	10080
GCGATGACCT TGGCTTCTTG ATAAAAGGGG TGTTGTAAAA GCCGCTCGGT TAAAGCTTGG	10140
TCTATAGCCT GTTTTGTCTT TTGAGATATA GCCTTCATTT CATGCAAGAC TTGCTTGGCT	10200
AATTCGATT TCATAGACAA GCCCTCTATT CTGCTGCCTT CTTTTTCAGG AACTAGACA	10260
CCGCAGCCAC CCCAATAGCT AAGACTTCTT CCTTAGGACT CATTTGAGGG TGATGAAGAG	10320
CGTAGGGACT ATCGATACCT AGCCAAAACA TCACGCCATC AACCTTTGAA AGGAGATAAC	10380
CAAAGTCCTC GCCTGTCATA GCAGGTTGCA TATCAATCAA CTCGATTCCG TCTTTTTCGT	10440
CAAAGAAGTC CATCAGTTCA CGCGCCAAGG CTGGATTGTT CTCAACAGGT AGGTATCCAC	10500
CTTGTTTGAG TTCCACTTCG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG	10560
TTTTTACCCT CTTTTCGACC AAGAGACTCA TGTCCTGTGT CAAGGCACGA ATAGTTCCAT	10620
GTAAAAAAGC TGTGTCTGTG ATGACATGTG TGGTGGTTCC AGCTTGAAAA ACGCCGAAGG	10680
TCACCACTGC TCCCTCGATT GGGTTGACAT TGCGGCTAAC AACTGACTGC ACTTGGGTCA	10740
CAAAGTAACT AGCCGCCACC AAGGCGTCAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC	10800
CTTTCCTTT GAAACGGATC TTCACCTCGC AAGTTCCTGC AAAGAGTGTA TGAGTATTAG	10860

998

TCGCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA	10920
ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTCTTCAG	10980
CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTGCTC CTCAAGGGCG CGCTCAAGAC	11040
AGCCTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTT	11100
GAGAAGCAAA AGGTAGACCT GTTTGTTCGA CGATAGGCAG GCCATCAATA TCTGTCCGCC	11160
AACCAATGGT TCGCTCCGGC TGAATCCCT GCAGGTAGAC CAAAATCCCT GTCCGCCAAG	11220
TACGAATTTG AACAAAATCC TTGCCGTAG TCAATTTCTC AATCACATCC AGCAAATAAG	11280
CCTGAGTCTT GAACTCCTCC AAGCCAATCT CTGGAATCTG GTGTAAATCT CGTCTAGTCT	11340
GAATCAAATC TAACATCTAT CTGTCCTCCG ATATAGCAGA AAGAGGCTGG AAAAAGGGTT	11400
CCGCTCTTTT TTTACTTTTA CAATTACAAG GTACGAAGCG CATCCTCTAG CGCTGTTTTT	11460
TGTTGAGTTT GGGCATCAAT TTCTTTGATA ATACGAGCTG GAACACCTGC TACTACCACG	11520
TTTTCTGGGA CATCTTGGGT AACAATAGCT CCGCTGCGA CAACTGAACC ACTACCGATT	11580
TGGACTCCTT CGATAACCAC TGCATTAGCA CCGATAAGAA CATTGTCTCC GACACGGACT	11640
GGTTCAGCAC TAGCTGGCTC AATCACACCT GCCAAAACCTG CACCTGCACC AACGTGGCTA	11700
TTTTTTCCAA CGATGGCAGC GCCACCAAGG ATGGCACCCA TGTCAATCAT GGTTCACGCA	11760
CCGATTTTCT CACCGATATT GATAACAGAT CCCATCATGA TAACAGCATT GTCACCAATT	11820
TCCACCTGGT CACGGATAAT CGCACCTGGC TCGATACGAG CGTTGATAGC ACGCTTATCT	11880
AGCAAAGGAA CTGCAGAATT ACGAGCATCT TGCTCGACAA CATAATCTTG ATTTTCTACC	11940
AAACCTTCAA GAAGCGGAGC CACATCCTTC CAGTCTCCGA ATAGGACATT TCCTAGTTTG	12000
ACAACAGAGC TAGGCACAGC AGTTGCGAGT TGCCCCTCAA AGGTTACTTT GAACTGGTT	12060
TTCTTTTCTCAG CATTGGCGAT AAATGGGATA ATTTCTTGAG CGTTCATTTT TGTAGCAGTC	12120
ATAGGTG	12127

(2) INFORMATION FOR SEQ ID NO: 149:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 12566 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

CCATCCTTCT GTTGATGTGA CAGGAATGAT GATAAATCAA CCAGTAGCTA GTCGGAAGA	60
GGTGACAGAG GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT	120

CGTTGAGCCA AATGAAGCTG GAGAAACACG CTTTACCTAT GCCACTTATG GTGAGGGAAA	180
GCTTCCAGAA GGTCTGACCA TTTCCTCCAA GGAGAGTGCA GAAACGAGTG ATTTATTAGG	240
GTCTTACTTG ATTGTATCAG GAAGTTTGA TGGAGTGAGC TTACAGACCA CCTTGAAAGA	300
GCTTGGTTAT CAAGGCTTTG TTTCGAATGG AGAAGATCCA TTTTCGATAG TCTTACTATT	360
GACGGCCACC CCTATGGTGC TACTGAGTTT AGCTATTTT CTGCTGACCT TTATGAGTCT	420
GACCTTGATT TATCGGATCA AATCCCTTCG TCAGGCAGGG ATTCGCTTAA TAGCTGGTGA	480
GAGCTTGT TT GGAGTTGCTC TCAGACCAGT GTTAGAAGAT GTGAGACAGC TTATCTGCTC	540
AGTGCTGGTA TCCAGTCTTT TGGGATTGGG GATTCTCTGG TATCAAGGTG CCTTGT TTAT	600
GGCAACGGTG CAACTGGTCA TCATTGCTCT TCTACTTTAT GGATTGACCT TGGCAGGGAT	660
TTCTACCTTA CTAAGTGTG TCTATCTACT TGGTTTACAG GAAATAGTC TGGTGGATCT	720
ATTGAAAGGG AAACCTCCCTC TCAAACGTAT GATGACATTG ATGATGGTGG GGCAACTCTT	780
AGCTGTATTG GTGGTCGGAT CGAGTGCGAC AGCTCTCCTA CCCCCTACC GTGAAATGCA	840
GGAAATGGAG AGAGCTAGCA ATAAATGGAG CCAGTCTCTA GACCGTTACC GTCTATCCTT	900
TGGTTGGTCT AGTGCAATTG CCGATGAAGA AGGAACGCGT AAGGATAATC GTGAGTGGCA	960
GACATTTACT GAAGAACGGT TAGCCAATAC AGACTCTTTT TATATTATGA GCAATGTGTA	1020
CAATTTCTCA GATGGAGCAG AAGTGGACCT AGATGGCAAT CGTCTCAGTG ACTACACACC	1080
GTCAGGGAAT GTTATCTATG TCTCACCGCG CTATCTGATA GAAGAAAAGA TTACCGTTTC	1140
TTCAGAGTTT ATGGACAAGA TGCAAACTT GTCTGAGGGA GAGTTTGGGC TGATCTTGCC	1200
TGAGAGCTTG CGAGAGCAGT CTGTCTACTA CCAAGGATTG TTTACAGATT ACCTGCAAAA	1260
CTTTTCATCT GAAAGTGTAG AAGTGACGAG TCAGAAACAC TACCTCCCAC AGGTAAGGCT	1320
AGCTTTTACA GAAACAGGAC AGGAACGTTT CCTCTATAAT GATGGGTACA AGACAACACG	1380
CCAGTACCTA AAAGATCCGA TTATTGTAGT TCTAACGCCG CAAGCGACTG GAACAAGACC	1440
TGTTGCAGGG ATGTTGTGGG GAACTACGGC TAATAGTGCC TTGAAACTAG ATCGATATGG	1500
AGACAGCATC ACAGCTCTAA AAGAGAAAGG TCTGTATCAC AAGGTTTCTT ACTTGGTAAA	1560
AAGCCAGCTA TTTTGTGCCA AGGTACTAAA TGACAAACGG GTGGAGTTT ACTCTCTCCT	1620
TATTTGGGACG ATTTTGACCC TGTCTACGGC TATCTTGTTA TTTGATTCCA TGAATCTTCT	1680
CTATTTTGAG CAGTTCAGAC GGGAACTTAT GATTAAACGT CTTGCTGGTA TGACAATCTA	1740
TGAGCTTCAT GGCAAGTATT TACTGGCGCA AGGAGGAGTT CTCTTGCTTG GCCTAGTCCT	1800
ATCTAGTATT TTGACAAGAG ATGGTTTGAT TAGCGCTCTA GTTGTAGCTT TGTTTACGCT	1860

1000				
TAACGCCCTC	TTGATTTTAG	TAAGGCAGGA	CAAAAAAGAA	GAAGCTGGTA GCATGGCAGT 1920
ATTGAAAGGA	AAATAAGATG	ATTGATATTC	AAGGATTGGA	AAAGAAATTT AATGACCGCG 1980
CGATTTTCCTC	TGGTTTGAAT	CTCAAGCTGG	AGAAGGGCAA	GGTTTATGCC TTAATCGGAA 2040
AGAGTGGAAG	CGGAAAGACG	ACGCTGCTGA	ATATCTTGGG	AAAGCTAGAA AAGATAGATG 2100
GTGGAAGGGT	TCTCTATCAG	GGGAAAGATT	TAAAAACCAT	TCCCACCTCGT GAGTATTTTC 2160
GAGACCAGAT	GGGCTATCTC	TTTCAAAATT	TCGGCCTCTT	AGAAAACCAA TCAATCAAAG 2220
AAAATTTGGA	TTTGGGTTTT	GTTGGTCAGA	AAATCTCAA	AGTAGAACGT TTGAAAGGC 2280
AAGTGGGGGC	TTTAGAAAAA	GTTAATCTAG	GGTATTTGGA	TTTAGAACAA AAAATCTATA 2340
CTTTATCTGG	GGGAGAGGCC	CAACGAGTTG	CCCTTGCTAA	GACTATTTTG AAAATCCAC 2400
CCTTGATTTT	GGCAGATGAA	CCAACAGCAG	CTCTTGATCC	TGAAAATTCA GAGGAGGTTA 2460
TGAATCTCTT	GGTGGATTTG	AAAGATGAAA	ATCGAATTAT	CATCATTGCG ACCCATAATC 2520
CCCTAGTCTG	GAATAAGGCT	GATGAAATCA	TTGATATGAG	GAAACTTGCT CATGTGTGAA 2580
AAAATCCGTA	TTGCGAGGGT	ATCTGATTAT	CCTAGTGCCA	GAGGTGGTTT AGAAGATATC 2640
CTCATCATGG	AAAATATGAC	CAATCATCTC	CTTTTGGTTC	AAATCCGAGT GCATGGCTAT 2700
TTGCTTGATT	TTGCTAGTAT	TGAAGGGCAA	AGGCAAAAGC	ATTATCGTTT GAAAAATTTA 2760
CCTCAGACGG	TTGAACTGAC	AGTGGATGAT	GTGGAGGAGG	ATGTGGATTT GACCCACCT 2820
GAAAATCGAA	GTTATCAAGA	AGCTGATTTT	TTTGAACGCA	TGTTTCGAGA GAACTGCTAA 2880
GGCCACTTTT	AAAGATTTCC	AAGACTATCT	TTCTTCATGA	GGAAAGATAG TTTTTTGGTA 2940
TGATTTTCAT	TCCCAAATA	CAAGGGGAAT	GTGTTACAAT	AGTAGTAACA GATAATAGAA 3000
AAGAGAATAG	ATGAGAATTG	CAGATTATAG	CGTGACCAAG	GCAGTGCTGG AGCGTCACGG 3060
TTTTACCTTT	AAAAAGTCCT	TTGGGCAAAA	TTTTTTGACG	GATACCAATA TCCTTCAAAA 3120
AATTGTGGAT	ACGGCTGAAA	TTGATGATCA	GGTCAATGTC	ATCGAAATCG GGCCAGGTAT 3180
TGGTGCCTTG	ACAGAATTTT	TGGCTGAGCG	TGCAGCCCAA	GTCATGGCTT TTGAGATTGA 3240
CCACCGTTTG	GTGCCAATTT	TGGCAGATAC	CCTGCGTGAT	TTTGATAATG TGACCGTAGT 3300
TAACGAAGAT	ATTCTCAAGG	TTGATTTGGC	GCAACATATC	CAGAATTTTA AAAATCCTGA 3360
CCTGCCAATC	AAGGTAGTGG	CTAATTTGCC	TTACTACATC	ACGACGCCTA TTCTCATGCA 3420
CTTGATTGAG	AGTGGCATTC	CTTTTGTGA	GTTTGTGGTC	ATGATGCAGA AAGAAGTAGC 3480
GGACCGCATP	TCAGCCCAGC	CTAACACCAA	GGCTTACGGT	AGCTTGTCTA TCGCCGTGCA 3540
GTATTACATG	ACAGCCAAGG	TTGCCTTTAT	CGTGCCTCGT	ACGGTCTTTG TGCCAGCGCC 3600
AAATGTGGAT	TCAGCCATCT	TGAAAATGGT	GCGTCGTCCA	GAGCCAGCCG TAGCAGTAGA 3660

1001

AGATGAGAAC TTTTCTTTA AGGTTTCCAA GGCTAGTTT ACCCATCGCC GCAAGACCTT	3720
GTGGAATAAC TTGACAGGTT ACTTTGGTAA GACTGAAGAG GTCAAGGACA AGCTGACCAA	3780
GGCTTTGGAC CAGGCAGGCT TGTACCAAG TGTGCGTGGG GAAGCTCTCA GCTTGGCAGA	3840
ATTTGCCGGT CTAGCAGACG CACTTAAAGG GCAAGGACTC TAAGATGCAG GGACAAATCA	3900
TTAAAGCCTT GGCAGGTTT TACTATGTGG AGAGTGATGG CCAGGTTTAT CAAACACGCG	3960
CGCGTGGGAA TTTCCGTAAA AAAGGCCATA CCCCTTATGT TGGGGACTGG GTAGATTTCT	4020
CTGCCGAGGA AAATTCAGAA GGCTATATCC TCAAAATTCA CGAACGGAAA AACAGTCTGG	4080
TTCGTCCGCC TATTGTCAAT ATCGATCAAG CTGTAGTAAT CATGTCCGTC AAGGAACCTG	4140
ATTTTAACAG CAATTTGCTG GATCGTTTCT TGGTTCTTTT GGAGCACAAAG GGCATCCATC	4200
CCATTGTCTA TATTTCCAAA ATGGATTTGT TGAAGATAG GGGAGAACTG GATTTTACC	4260
AGCAGACCTA TGGTGACATC GGCTATGACT TTGTGACCAG TAAAGAGGAA CTCCTGTCTT	4320
TGTTAACAGG CAAGGTTACG GTCTTTATGG GGCAGACAGG TGTGGGAAG TCAACTCTTC	4380
TCAATAAAAT CGCACCAGAC CTCAATCTTG AAACGGGAGA AATTTAGAC AGTCTAGGTC	4440
GCGGTCGCCA TACCACTCGA GCTGTTAGTT TTTACAATCT CAACGGGGGT AAAATCGCAG	4500
ATACACCAGG ATTTTCATCC TTGGACTATG AAGTATCAAG GGCTGAAGAC CTCAATCAGG	4560
CTTTCCCGA GATTGCTACT GTTAGCCGAG ATTGTAAGTT CCGTACTTGT ACCCATACCC	4620
ATGAGCCGTC TTGTGCCGTC AAACCAGCTG TTGAAGAGGG TGTATTGCA ACCTTCCGTT	4680
TTGACAATTA CCTGCAATTC CTTAGTGAAA TTGAAAATCG TAGAGAAACC TATAAAAAAG	4740
TCAGCAAAAA AATTCCAAAA TAAGGAGAAA CCTATGTCTC AATACAAGAT TGCTCCGTCA	4800
ATTCTGGCAG CAGATTATGC CAACTTTGAA CGTGAAATCA AACGTCTAGA AGCAACTGGG	4860
GCAGAATATG CCCATATCGA TATCATGGAC AGTCATTTTG TACCGCAAAT CAGTTTGGT	4920
GCAGGTGTGG TCGAGAGCCT TCGTCCTCAT AGTAAGATGG TTTTCGATTG CCACTTGATG	4980
GTGTCAAACC CTGAGCATCA TCTGGAAGAT TTTGCGCGTG CAGGTGCAGA CATCATCACT	5040
ATCCATGTAG AAGCAACGCC TCATATTCAT GGCGCCCTCC AAAAAATTCG TTCACTCGGA	5100
GTTAAGCCTT CAGTCGTTAT CAATCCTGGC ACATCAGTTG AAGCCATCAA GCACGTCCTT	5160
CATCTAGTTG ACCAAGTTTT AGTCATGACG GTTAATCCAG GTTTTGGTGG GCAAGCCTTT	5220
CTGCCAGAAA CCATGGATAA GGTCCGTGAG TTGGTTGCTC TTCGTGAGGA AAAAGGTTTG	5280
AACTTTGAAA TCGAAGTGGA TGGTGGGATT GATGACCAA CTATTGCTCA AGCCAAAGAA	5340
GCCGTTGCGA CTGTTTTTGT AGCAGGTTCC TATGCTTTTA AGGGAGAAGT CAATGAGCGA	5400

1002					
GTACAAACTC	TCAGAAAACA	ACTGGACTAG	GGTTGCAGTT	TTTGCAGGCG	GAAACCGCGG 5460
TCATTATCGG	ACAGATTTTG	ATGCTTTTGT	TGGGGTGGAT	CGAGGCTCGC	TCTGGGTCTT 5520
GGAAGAAGAC	TTACCTCTTG	CTCTAGCAGT	CGGAGATTTT	GATTCTGTGA	CGGAAGAAGA 5580
GCGACAGGTG	ATTCAAAAAG	GTGCCCAGTA	TTTTGTCCAA	GCACGACCAG	AAAAGGATGA 5640
TACAGATCTG	GAATTGGCTC	TCTTAACCAT	CTTTGAACAA	AATCCTCAGG	CTCAGGTCAC 5700
TATTTTCGGT	GCCTTGGGTG	GCCGTATTGA	CCATATGTTG	GCCAATGTCT	TTCTGCCTAG 5760
CAATCCTAAG	TTGGCACCTT	ATATGCATCA	AATAGAAATT	GAGGATGGGC	AAAAC TTGAT 5820
TACTTATTGT	CCAGAAGGAA	TCAGTCAGCT	AGAACCTCGT	TCAGACTACG	ACTATCTAGC 5880
CTTTATGCCA	GTTCCGGGATA	GCCAGCTGAC	TATTCTTGGA	GCCAAGTATG	AGTTGACAGA 5940
GGAAAATTTT	TTCTTTAAAA	AAGTGTACGC	TTCTAACGAA	TATATAGATA	GGGAAGTGTC 6000
GGTAACTTGC	CCAGATGGTT	ATGTGGTCGT	ACTGCATAGC	AAGGACAGGA	GGTAGGATGG 6060
AAAGTTTACT	TATTCTATTA	TTAATTGCCA	ATCTAGCTGG	TCTCTTTCTG	ATTTGGCAAA 6120
GGCAGGATAG	GCAGGAGAAA	CACCTAAGTA	AGAGCTTGGA	GGATCAGGCA	GATCATTTGT 6180
CAGACCAGTT	GGATTACCGC	TTTGACCAAG	CCAGACAAGC	CAGCCAGTTA	GACCAAAAAG 6240
ATTTGGAAGT	GGTTGTCAGC	GACCGTTTGC	AAGAAGTGG	GATTGAATTG	CACCAAGGTC 6300
TGACCCAAGT	CCGTCAAGAA	ATGACAGATA	ATCTCCTCCA	AACTAGAGAC	AAGACAGACC 6360
AACGCTCTCA	AGCCTTGCG	GAATCAAATG	AGCAACGTTT	GGAACAAATG	CGCCAGACGG 6420
TCGAGGAAAA	ACTAGAAAAG	ACCTTGCGA	CACGCTTACA	GGCTTCCTTT	GAGACAGTTT 6480
CTAAACAAC	GGAGTCTGTC	AATCGTGGCC	TTGGAGAAAT	GCAGACAGTT	GCCCGTGATG 6540
TCGAGGCTCT	TAACAAGGTT	CTCTCTGGAA	CCAAGACGCG	AGGGATTCTG	GGAGAATTGC 6600
AACTGGGGCA	AATTATTGAA	GACATCATGA	CACCTGCCCC	GTACGAACGA	GAATACGCAA 6660
CGGTTGAAAA	CTCTAGTGAA	CGAGTGGAGT	ATGCCATCAA	GTTACCCGGA	CAAGGCGACC 6720
AAGAATACGT	CTATCTGCCA	ATTGACTCTA	AGTTTCCACT	GGCAGATTAT	TACCGCTTGG 6780
AAGAAGCCTA	TGAGACAGGT	GACAAGGATG	AGATTGAACG	CTGTCGTAAG	TCACTCCTAG 6840
CAAGCGTCAA	GCGCTTTGCT	AGGGATATTA	GGAACAAGTA	CATAGCACCA	CCTCGGACGA 6900
CCAATTTTGG	AGTTTGTGTT	GTTCCGACAG	AAGGTCTCTA	CTCAGAAATC	GTCCGCAATC 6960
CGGTCTTCTT	TGATGATTTG	AGACGGGAAG	AACAGATTAT	TGTTGCAGGA	CCAAGTACCC 7020
TATCAGCCCT	TCTTAACTCC	CTATCAGTTG	GTTTCAAGAC	CCTTAATATC	CAAAAGAGTG 7080
CCGACCATAT	CAGCAAGACT	CTTGCCAGTG	TCAAGACCGA	GTTTGGCAAG	TTTGGTGGTA 7140
TTCTGGTCAA	GGCACAAAAA	CATCTCCAAC	ATGCCTCTGG	CAATATTGAT	GAATTATTAA 7200

1003

ACCGTCGTAC CATAGCTATC GAGCGGACGC TCCGTCACAT TGAGTTGTCA GAAGGTGAGC	7260
CTGCGCTTGA TCTACTCCAT TTTCAAGAAA ATGAGGAAGA ATATGAAGAT TAGTCACATG	7320
AAAAAAGATG AGTTATTTGA AGGCTTTTAC CTAATCAAAT CAGCTGACCT GAGGCAAACT	7380
CGAGCTGGGA AAAACTACCT AGCCTTTACC TTCCAAGATG ATAGTGGCGA GATTGATGGG	7440
AAGCTCTGGG ATGCCCAACC TCATAACATT GAGGCCTTTA CCGCAGGTAA GGTGTCCAC	7500
ATGAAAGGAC GCCGAGAAGT TTATAACAAT ACCCCTCAAG TCAATCAAAT TACTCTCCGC	7560
CTGCCTCAAG CTGGTGAACC CAATGACCCA GCTGATTTC AAGTCAAGTC ACCAGTTGAT	7620
GTCAAGGAAA TTCGTGACTA CATGTCGCAA ATGATTTTCA AAATGAAAA TCCTGTCTGG	7680
CAACGGATTG TCCGAAATCT CTACACCAAG TATGATAAGG AATTCTACTC CTATCCAGCT	7740
GCCAAGACCA ACCACCATGC CTTTGAAACG GGCTTGGCCT ATCATACGGC GACCATGGTG	7800
CGTTTGGCAG ACGCTATTAG CGAAGTTTAT CCTCAGCTCA ATAAGAGCCT GCTCTATCG	7860
GGGATTATGT TGCATGACTT AGCTAAGGTC ATCGAGTTGA CGGGGCCAGA CCAGACAGAG	7920
TACACAGTGC GAGGTAATCT TCTTGGACAT ATCGCTCTCA TTGATAGCGA AATTACCAAG	7980
ACAGTTATGG AACTCGGCAT CGATGATACC AAGGAAGAAG TCGTTTGTCT TCGTCATGTC	8040
ATCCTCAGTC ACCACGGCTT GCTTGAGTAT GGAAGCCCAG TCCGTCCACG CATTATGGAA	8100
GCAGAGATTA TCCATATGAT TGACAATCTG GATGCAAGCA TGATGATGAT GTCAACAGCT	8160
CTTGCTTTGG TGGATAAAGG AGAGATGACC AATAAAATCT TCGCTATGGA TAATCGTTCC	8220
TTCTATAAAC CAGATTTAGA TTAATAATTT AAGAAAAATG AGCATTTTTT AGGATAAGAA	8280
TGTTTCGTTTT TTTATGTGAA TATGGTATAA TAAGTAAAG AAAAAATGA ATACTCTTCG	8340
AAAATCTCTT CAAACTAGGG TAGTATCGCC TTGTCGTATG TATATATGCA GGTATATTAC	8400
AGGGTTTGTG AGTTCTATTG ACAATCTCAA AACAGTGTTC TGAACCACCA GCGACCAGCT	8460
TTCTAGTTTG CTTTGTGATT TTTTGAATAA AAATGGAATA GGAAATAGAA ATGAAATTAA	8520
GAAGAAGTGA TCGGATGGTT GTCATTTCCA ACTATTTGAT TAATAATCCT TATAAACTAA	8580
CTAGTCTCAA TACTTTTGCT GAAAAGTATG AGTCTGCTAA ATCATCCATC TCAGAAGATA	8640
TCGTATTAT CAAACGCGCC TTTGAGGAAA TTGAAATCGG TCATATCCAG ACAGTGACTG	8700
GGGCTGGCGG AGGTGTCATC TTCACACCGT CTATTTGAG TCAGGATGCT AAGGAAATGG	8760
TTGAAGACTT GCGTACCAAG TTGTCAGAAA GTGACCGTAT CTTGCCAGGT GGTATATCT	8820
ATCTGTCTGA TTTGCTTAGC ACACCAGCCA TCTTGAAAAA TATTGGTCGT ATTATTGCCA	8880
AAAGCTTTAT GGACCAAAAA ATTGACGCGG TTATGACCGT AGCAACTAAG GGTGTGCCAC	8940

1004

TTGCAAATGC AGTTGCCAAT GTCCTCAATG TCTCTTTTGT CATTGTGCGC CGTGACCTGA	9000
AAATTACCGA AGGTTCAACT GTTAGCGTCA ACTATGTTTC AGGTTCAAGT GGTGACCGTA	9060
TCGAGAAAAAT GTTCCTTTCA AAACGTAGTC TTAAGGCAGG CAGCCGTGTC TTGATTGTGG	9120
ATGACTTCTT GAAAGGTGGC GGAACGGTCA ATGGTATGAT TAGTCTCTTG CGCGAGTTCTG	9180
ACTCAGAACT GGCAGGTGTA GCGGTCTTTG CGGACAATGC CCAAGAAGAA CGTGAAAAGC	9240
AGTTTGACTA CAAGTCACTC TTGAAGGTAA CCAATATTGA TGTCAAGAAC CAAGCCATCG	9300
ATGTTGAGGT TGGCAATATC TTTGACGAAG ATAAATAAGA GATAGAAGTA AAGGTTGGAA	9360
CGATTGTCCC AGCCTTTCTT TGCAAACAGA ATAGAAGGAA GCTTATGAAA ACACCATTTA	9420
TCAATAGAGA AGAGTTAGAA GCGATTGTTG CCGAGTTCCC GACTCCCTTT CACTTGTATG	9480
ATGAGAAGGG GATTCTGTAG AAGGCAAGAG CCGTCAACCA AGCTTTTTCG TGGAACAAGG	9540
GCTTTAAGGA ATATTTTGCA GTTAAGGCTA CTCCAACCTC AGCTATTTTG AAAATCTCC	9600
AAGAAGAAGG TTGTGGTGTG GACTGCTCTA GTTATGTAGA GCTTTTGATG AGCCATAAAC	9660
TGGACTTTCT GGGTTCTGAG ATTATGTCTT CTTCCAACAA CACGCCAGAC AAGGAATACG	9720
CCTATGCACG TGAATGGGT GCGACCATTA ACTTGATGTC CTTTGAAGAT ATTGAACATC	9780
TGGAGAGAGT AGCAGGCATT CCAGAAATCA TCTCTGTGTC TTATAATCCT GGAGGCGTTT	9840
TTGAACTGGG GACAGACATT ATGGACAATC CTGGGGAGGC TAAGTTTGGC ATGACCAAGG	9900
ACCAGCTCTT TGAAGCCTTT GCTATCTTGA AGGAAAAAGG AGCCAAGACT TTTGGGATTC	9960
ACTCCTTCCT AGCGTCCAAT ACCGTGACCC ATCTCTATTA TCCAGAGTTG GTCGTCAGC	10020
TCTTTGAACT GGCTGTTGAA ATCAAGGAAA AGTTGGGCAT TTCGCTAGAC TTTATCAATC	10080
TTTCTGGCGG TATTGGTGTT AATTATCATC CAGACCAGGA GCCGAACGAT ATCGCCTTGA	10140
TTGGTGAGGG AGTTCGTAAG GTGTATGAAG AGGTTCTTAC GTCAGCAGGT CTTGGTCAGG	10200
TCAAGATTTT CACCGAATTG GGTCTTTTGA TGCTGGCACC TCACGGTGCT CTAGTCACAA	10260
GAGTCACTCA TAAGAAGGAA ACCTACCGTA CCTATCTAGG TGTGGATGCC TCAGCAGTCA	10320
ACCTCATGCG TCCAGCTATG TACGGAGCTT ACCATCATAT TAGCAACGTG ACCCATCCAG	10380
ATGGACCAGC TGAAGTGGTA GATGTGGTCG GTTCACTCTG TGAAAACAAT GATAAAATTG	10440
CAGTTAATCG CGAACTGCCT CATACAGAAA TCGGTGATTT GCTGGTCATT CATGATACAG	10500
GTGCCCACGG ATTTTCAATG GGCTACCACT ATAATGCCAA ATTACGTTCT GCGGAAATCC	10560
TCTATACCGA AGAAGGTAAA GCGGTCAAA TCCGCCGTGC AGAGCGCCCT GAGGACTATT	10620
TTGCAACCTT ATATGGCTTC GATTTTGAAG AATAATCTGA TAATAGATTG AAAATGAAAT	10680
TGAAAAACAG ATTGCTTTCT AAAAAATAG CAAAAATCTT GTTTTCTCTT CAAGTCGTGA	10740

1005

TATAATAAAA CTATAAACG TTTTCAAGGA AGGTAACGAT ATGTCTGAAG AAACAATTGA	10800
TTATGGACAA GTGACAGGAA TGGTGCATTC GACAGAAAGC TTTGGGTCAG TAGATGGGCC	10860
TGTTATTTCG TTTATTGTCT TTTTGCAGGG CTGTACATG CGTTGCCAGT ATTGCCACAA	10920
CCCAGACACT TGGGCTATGG AGTCCAATAA GTCACGTGAA CGGACGGTAG ATGATGTCTT	10980
GACAGAGGCC TTGCGCTACC GTGGTTTCTG GGGAAATAAG GGTGGGATTA CAGTCAGTGG	11040
AGGAGAAGCT CTCTGCAGA TTGATTTCCT GATTGCTCTC TTCACCAAGG CTAAGGAACA	11100
AGGAATCCAC TGTACCTTGG ACACCTGTGC TCTTCCTTTC CGTAATAAAC CACGTTACCT	11160
TGAGAAGTTT GACAACTCA TGGCTGTCAC TGACTTGGTT CTTTGGATA TCAAGGAAAT	11220
CAACGAAGAA CAGCACAAGA TTGTCACTAG CCAAACCAAT AAAAATATCT TGGCTTGTGC	11280
CCAGTATCTA TCAGATATTG GAAAACCTGT CTGGATTCGC CACGTGCTAG TTCCAGGATT	11340
GACAGACAGA GATGATGACT TGATTGAACT TGGTAAGTTC GTCAAGACCC TCAAAAATGT	11400
TGATAAGTTT GAAATTCTAC CTTATCACAC CATGGGTGAG TTCAAGTGGC GTGAACTTGG	11460
AATTCATAT TCCCTCGAAG GAGTCAAACC ACCAACAGCA GATCGCGTCA AGAACGTAA	11520
ACAACATCATG GATACCGAAA GTTATCAAGA TTATATGAAA CGTGTACATG GATAGAAAAG	11580
AAGCCTGATG GAAACATCGG GCTTTTGACT TGCAAAAAGA CTTAGCAAAT CAGCTAAGCC	11640
TTTTTCTTCT TATCTCGAAC GTTGTTTTCC AGCGTTGCGA TTTTGTGTT TTTTCTTGCT	11700
TGTGATAGCA GTTGGTTGTT CAGGGGTAAC GTCTTTTCGT CCACTTGGTT TAGAGAAAGC	11760
ACTTGCTTTT GGTGGGTCT TGGCTAGTTC TTCACGGACT TTTTTCGAA GTTTTGGACG	11820
AACGATATAG TTGACGATAA ACTGTTGGAG AATCATCATG AAACCACCGA CAACCCAGTA	11880
AAGTGTGACA CTAGCTGGTG AGAAGAGGGA GAAGACGACG ATCATGAGTG GGCTCATGTA	11940
AATCATTTTC TTGATTGTT CTCTTGCAT TTCATCTTCT ACTCCGTGAA GTGAAAGGAG	12000
CGATTGAAGA TAGTAAAGGA CACCAGCACA GGCAACCAA ATCATACTTG GAGAACCTAG	12060
AGGAATGCCT AGGTAGCTTG CTTGAGCAAC CCCTTCAGTA TGTGGGCAG CAAAGTAGAT	12120
AGCAGAGAAG AAAGGCATTT GAAGGAGGAT AGGGAAACAT CCTACACCGC CAAACATGCT	12180
GATACCGTGC TCTTTTGTAG CAGCAAAGAG AGCTTGTGG GCTTCGAGTT TTTCTTCTTG	12240
AGTAGTCGCT TCTTTGAGAC GCGTTTGGTG TGGCTCAAGG ACGTGCTTGA GGGCGTTCAT	12300
CTTTTCAGAG TGAAGCGTTG CCTTCCATGA TTGGTAGATA CCAAGTGGTA AGATAATCAA	12360
GCGTACGATA ATGGTTACGA TAATGATAGC GACACCAAAG CCTAGACCTT TATCAGTAGC	12420
GAAGTACTTG ATGGCTTCAG CCATAGGCGC TCCGATCGTA TTCCAAATAA ATCCTGTTGG	12480

1006
CTGACCTGTG GTTTTATCGA CATTGACACA GCCAGTCAAG ACAAGCAACA TAGCCACTCC 12540
CATAGCCGAG AGTGCAAAAT CGGGGT 12566

(2) INFORMATION FOR SEQ ID NO: 150:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5238 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

TGACACTCTG TAGGATTGTC GTTAATTGAT TGCTCGTACT CTCTACAATA ACCACCAAAG 60
TAAAAACGAC ATAGAAAGAT AGCATCAGCT GTAGCCATAG CGCCTTTGAC ACCTTCTGGA 120
TGATTATGAG TTACCTCTGC AGAAAGACTC GTAAGTCCTC TAGATGATGG CCATATACCA 180
GTTTTCGCAT AAAAACCACA GTCCATGATC CAAGCACATG GAGAAATACG CATAGCTGAT 240
CCATTCCTCA AGCTATTATA AGGCTCACGG TTATCGCTGT TTAGCCATGC ATTAAACCGA 300
GCACCCTAAT CAGCATTCGG ATACATTCTG CCATATTTCT TCATCGCGTC AATGAAGTCA 360
TCTTTTGTGTC CACCATTCTAT AATTGCTTCT GCAACAGCAC AGGTCATAAC CGTGTCATCT 420
GTAAAAAGC AGTCCTTCCG AAATAAAGGA AAGTCCTTTG TTTTGATATT GTTCCATTCTG 480
TAAACAGAAC CGACAATATC TCCAATAATT GCTCCAAGCA TCAGATTTCCT CCTTGTTTCAT 540
TTTGATGCTT TTTATATTGG TTATCTACCA TATTTATTTT AGAAAATAAC ATCCTGTTGG 600
ATTTTAAAAA TTTTATTTT TTCAAATAG GGTTTTACCA TTTCTTTCCA CCTAGCTCTA 660
TGAAAATTGA TTGATTTTAA AGGAGATAGG CCATAATTTC CCAATGCATA ACCATCATTT 720
ACTTCAACAA CAAGTGTTCT GCCATCGCGA GTAACACCGA TATCTAGTCC ATAAGCTATT 780
GGCGCATCTT TCCAACATGA TATCGCTTCA TCAATTACAC TTGCATCAAA TTGTGCATGA 840
TAATCACCTG TATAGGGTCG AACATCTAAT ACGCGACCAT CTAACACAAA ACAACGCCAT 900
TCAGCTATGA ATTCTACAAC CTCCTAATC CATATAGGAT AGTCGAAAGG TAGACCAATA 960
CCTATTAAAT CATGGGTTC ATTAACAAC CTTCAGTAA AGACTTTTGA ACCAGCTTTA 1020
GGCTTAATAA ATTTTCCCA ATTATCAGGT ATATTCACAA TCTCTCCTAA AATACCAGCA 1080
TAAATCTTTC GACCATAAAA CTCTTTAAGC TCAATAGGAT AGTCATGAAC CGGAACGTTT 1140
AAGCCCATCA TTTTATAGTAA TGCTCTAGTC TCCATTATAT AATCTACAAC TATATCTTCA 1200
CTTGTTAACT CTTTATTTT AGAAAAAGAT TGATATAAAA TAACTTCTTC TCCTTGTAAG 1260
TAGGCACCTA CTTGAGCATT GTATTATTA ATTGAAACCT CACTTGGTAA TTTACTTTGT 1320

1007

CTAATATAAA CAACCATTTTC ATCACTCCTA TATCACTAGT GTTACACCAA TTTGTAAAAA	1380
ATAATAGCAA TTTTGCTCTT ATTTTTTTGA GTAAATAGCC CCCATAATAT CATCGAAATA	1440
ATCAACGGTA TTTAGGAGTA ATTCAATAAC CTGGGACTTT GTTAGTCGCA TTCCCTTCT	1500
ATCTCTAGCA TCTTCTACTA AATTTTCAAG TTTCTCTAGA TTTTATCAT CCAAGCTAAT	1560
CATTATTCTA TTTTATCGG TTGCCATTTT CATCACCTCA AGTTAATTCT ATCACAGGTG	1620
TAACACTAGT GTCAACTGGC TTTTATAATA CATTAGTTTA AAAGTGGAGA GGATTTTAA	1680
CACAGTAACT TTAAATCTTT GGTATTAAAA AATTTTCACA ATATTTATAG AAATAAAATC	1740
TGTCTCAAAT CAGTTATCAA ATCTAGTATA AATTATGAGC GGCTACTCTA ATACTTTCCC	1800
TCTAAACAAG AAAAAGACTT ACACTCAAGG GTTTTCTTCC CCCCCTTCGT TATAACGTTT	1860
TGACTCTTTT ACTAGCAAAG GTATATACTC ACAAGGAACT TTGGTTGACT ATTGAATCTC	1920
TCCAACCTCT TCTTTAACAT ATCCTTCTAC ATCTTCAATC TCTACAAACA TTGGGTCTAA	1980
GTGACACAAG AAATGCCAAA CTTGATCCCC TTTTCTCTG TAAAGAATCG CTTACCGTC	2040
TTCACCTCCG AAAAAGCTTC TGTCGATTTT ATATCCGCGG CTTTCTAAGA AGTCTTTTGC	2100
TTTACGATAG TTCGTTTCTC TTGTTTCGAC ATAGGCTTTA ACTTCATGGT TGTTAACGAC	2160
ATATGCATCA ATTTTTGAAT ATCCTTCGAT CACTCTATCA TTTTGTAGGG ATAAATTTGA	2220
AATCTCTTTC CAAATAATGT TTACATTTTC CTCAGGATCG AACATAAATT TAGATAAAGG	2280
AACAATATTT CCGTTAAAAA TAATTTCCAT ATAATCCGGT ATGTTTTTAG GATTAAATA	2340
CTCCACTTCA AAACCATCTT CTGTTTCCAG AGTGTATCCC GGGATTTGAG CTACAAAGGC	2400
TTTCCCATCT TCTATGGAAT CAAATGCTAC TAAATCTTTA GAATAATCAT TTTGGTACAA	2460
TTCCAATATA ACCATCGATA ATCTCTCCAT TTTCATTATC AGGCTAATGT AAATAAGCAC	2520
GTCACCTGAC CAATTCAGGC TCTCTGTATC ATCTCATCAT ATTCCTACT TACTTTACGA	2580
GTCTTATACC CAGAACACAC CTTATCGACC TTCGGTCTCA CCTCGTCGCA TTGGCTGAAC	2640
ATCTACTTTT ACTTTGCTGA TGCTTCAACT CGTACAAGCA GTGATACCGC CTCAGCGTGA	2700
TGCGTCAGTG GGA CTCAAAA GGTTCGGGGA ACCTTTTGAG GATTAACTAC GTTTCTCTAA	2760
TAAACTTACA CATTCAACTT GTTCATCATT GTCCAAACCT ATGTTGAGAT TTTCTTCTAT	2820
AATTGGTAGC TTA AAAAGTAA TGGATTTTAG CCATTGTCCG TTAGATTGTT TTTCTTCATA	2880
AACTTGAATT TCAGAAATCA AAGCTGAAAT TAACTGCCTA CGCTCTACAT CATTATGAC	2940
TTTATAGAGC TTATCAAAAT AGATCAGAAC CTTATATATG TTATCTCCTG TAAGCTTTTC	3000
AGCTTCAATA GTCTGTTTCT TTGCTTTCGC ATCAATTAGT GATGATTCTA ATTCATCTAG	3060

1008

TTTGTCTATAC ATACGATATA GTCTATCATC TAAATCCTGT TTCCTTCTCT TATAATGCTT	3120
ATCTTCAACA TCTAAATTAT CTATTTCTCT AATTAGCTTA AACTTTGTAG AATGACTCTT	3180
TCTCAATTCC TTTTGGAAT TATCTATTTT TTTTCTATT TCAGAGGTAT CCACCTTCAT	3240
GTTGATTTTT TCTTGCATCA TAGAAGCAA TTTCCGATTA CTTACTATCT TGACAATCAC	3300
CTCTGCAACA GCATCATCTA ACAATTCTTC TCTAATTTGC TTTACTGAATG TACACTTATT	3360
ACCTCTTATC ATCTGCCTAT GGTTACAACC ATAGTAATAA AAATCTTAT ACTTTGTGCC	3420
ATCTTTCTTT TTCTTGATAC ACTTGTTCCC AAACATTTCCC ACTCCACATA TCGGGCATTT	3480
TACAATTCCA GAAAGCAAGT GTGTGCGTGT ATCTTTTCCT TTATTCACAT GCTCATATTT	3540
CTTTGCTTGA GATTTTAGCT TAACCTGAGC AGCTTGCCAA ACTTCATCGG AAATATAGC	3600
TTCATGTATC CCTTCAGATA TTAGATATTC ATCTTGTTCA ACCTGCTTAT ATTCAATTTCT	3660
TGTACCATGA ACTTTTTCTA AAGTTCTTCT TCCAAATGCT ATTTTCCCAT TATATACAGG	3720
ATTCTTTAAT ATCTTTCTTA TAAGACCTGC ATCAAACAAA GGATTCTTAC CATCTGTCT	3780
TGGGATTTTT CTAATTCAT GATTCTCTAA GTATTTAGAT ATCCCATTGG CTCCTATCGT	3840
AGTATTTACA TACTGGTCGA AAATCGTTCT TATTGCAACT GCCTCTTCCT CATTTATAAA	3900
CAGCTTGCCG TCTTCAAGTT TATATCCATA CGGAGCAAAG CCACCATTCC ATTTCTCTTC	3960
CCCTGCTTTT TGAATGCGAC CTTCATTGT TTGAATACTG ATGTTTCTC TTTCTATTTT	4020
AGCCACAGCT GATAAACAG AAATCATTAG TTTCCCAGCA TCTTTAGATG AATCAATGCC	4080
ATCTTCAACG CAGATAAGAT TAACTCCATA ATCCTGCATT ATATGAAGTG TAGAAAGAAC	4140
ATCAGCGGCA TTTCTTGCAA ATCTTGATAA CTAAACACA AGAACAAAAG ATACTCCATC	4200
TTTTCCAGAT TTTATATCTT CCATCATTCG ATGAACTGT ATTCTACCTT CAATAGACTT	4260
GTCAGACTTC CCGGCATCTT CATACTCTCC AACAATTTCA TAATCGTTGT AAATAGCAAA	4320
AGCTTTCATT CGTGATTTTT GTGCCTCTAA CGAATACCCC TCTATCTGTA TTGACGTAGA	4380
TACTCGTGTA TAGAGGTATA CTTTTATTTT TTCTTTTGAC ATAGTATTAA CCTCAATATA	4440
ATTTTCTAT ATCATATATA ATTTTTTAA TTTAAGTTTG GACTATCATT TCAAGTATAT	4500
TATAACACTT TTATTAGTCC GTCTCAATTT GTGTTTTTGC CATGTCAAAA CTATTTTCA	4560
TCTCTTGATT TTTTGCTGGC GTTGATCGG GTAGATTATC TAAATCTAAA GCACCAGCAT	4620
ATTTTGCAAT CAGATTTGCT ATTAATCAG CCAATCCATT CCAGTCATTG TCCAATATAT	4680
ACCTCCTCTA AAGTTTTATA TCTAATAATT ATTTGTTTAA TTAAGTTTTT TGACATTGAC	4740
AAGTGCTTTG GATTAGCAAC ATAGGAATCT CACTCCGCC TCTATCCGG ATGAGCCGGC	4800
TTCAACCTTA GAAGTATCAT TACCCTCATT TTCTTCATAG CGGATAGGGT ATCCCTCCCT	4860

1009

ATATTCAAAC TCTTACTTAT CGCTCACTTT CTTTTTGCTT AGCAGAACTT TTTTGGCCGA	4920
ATTATTTCAGC CGAAAGATCT TGACGGATAG GTTATTACGC TCCAAAAATA ATTAACGTCT	4980
TGTCTTGGTC TATTC AATTG TTAAGGTTCA AAATTTATCG AGAGTTATTA ATCTTTTAA	5040
AAATTGACCA TCAGAAAATA TTTATCTTGA TGAACAAAA TTCTATAAAT TACCCTCTTA	5100
TACTTAACAG TGAAGAAG TCTTCTTGG TAACCAATTT TGAAATAGAA TTGCTTATA	5160
TAAAAAGGTC CAATTCAC TGCATAAATA GCAGTGAAAA TTAGACCCTC TTGGTAACTG	5220
TCATCTAAAA GTCTTCTA	5238

(2) INFORMATION FOR SEQ ID NO: 151:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13425 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

GACGATTTAC GAAGAATCGA ACAAGAACCT GCTCCTATCA ATTCCCAACC TCTATCTCTA	60
AAATCTTGCA GTTCATGCTT ATACTTTTTT AAGAAATCTA GAATCATAGA TACGGTAGAT	120
GACATCGTCT GGTGACATT GGTCAAAATA GAACAAACCA AACGACTCG TTCTATACCT	180
CCAACCTTTC AAATGCATCT CATGTAAATG TTCTTCTTCC TTGTCCAAAT CAACAATGGT	240
GAAAAATCCGA AATTCTACTC TGCTATTCAT TGTCTTACCC CAAAATTAGA AAACATGCCT	300
GGCGTTATTT ATTAGATAAT TCTTCCACT TTTGACTCAA TCTCCAAAAA ATATAAGAAA	360
TCTGAATCGC AAAAATATC AATAAAACCC AATCTATTAT GAAAATCAAA AACACTTTCC	420
AACTGAAAGA ACTACCTCCA GTGACAAACT TTGAGAAAAA CGGTAGTAGA GCTAAAAAGA	480
GAAATAAAAAT AGGAAGCATC CGCATTGTTA AAATCCGTTT GGCATAAAAA AATCTTTATT	540
TAAACGAAAA TATTATGGCA AAATTTACGC CAGTTTTTGA ACGGCTGATG TAGATATTTT	600
ATACTTTCAA AATGTTTAAA TGTGATTATT TATTTTTGAA AAATAGATCA CCAGCCCGAC	660
TGAAAGTGCT TATAGAATGA TAATAAGTCG CCTGCCGAAA ACAGCGAAAA ATAGCGGTGT	720
TATGCGGAGA TAATCTGACG CGATGCGAAA GTATATTGCA TACTTATTTT CAACAATTTA	780
GCAGAGTATT TTTATAAGTG TGATATAATA GAAGTATAAT TTGTTCTGAT AGTTTATTTT	840
ATGGAGAAGT AGATTTT TAG AATGCGGAGG GTTCAATATG GTTGAGTTTA TAAAGCTAA	900
GAAAGAAATG AGTGAGGAGG ATATTAAAGC AAATTCATC ACTCCTGCTA TTGTATCCAA	960

1010

AGGATGGAAA AATGGTGAGC ATATCGCTTA CGAAGAATAC TTCACTGATG GTCGAATTGA	1020
AGTTAGAGGA GATAAGGCTC GTCGTAAAGA AGGAAAAAAA TCAGACTATT CACTGTATTA	1080
CCAATTTGGA ACTCGAATTG CAATTGTTGA GGCAAAGGAT AATAAACACA GCGTTCGAGC	1140
AGGATTACAA CAAGCTATTG AATATGGAGA GATTTTAGAT GTTCCATTG TTTATCTTC	1200
GAATGGTGAT GGCTTTATTG AACACGACCG TATCACGAGA GAAGAACGTG AGCTGGAGTT	1260
AGACGAATTC CCTACTCGTG AAGAATTATT TTCTCGTATG ACGAAGGAAA AAGGATTGAC	1320
GTACGAAATT ACAGAAGCTA TCTCAACTCC ATACTATACA GACGCCTTCT CAATGAAAAC	1380
GCCACGCTAT TATCAGCAAA TAGCTATCAA CCGTACTATT GAAACAGTTG CCAGAGGACA	1440
AAAACGAGTA ATGTTTGTGA TGGCAACAGG AACGGGGAAA ACGTTCATGG CTTTTCAAAT	1500
TATTCATCGC CTTGCAAAAG CTGGTTTGGC TAAACGAGTT TTATTCTTAG CAGATAGAAA	1560
CATCTTAGTA GACCAAACGA TGGCTGAAGA CTTTAGGCCA TTCGAAAAGG TAATGACGAA	1620
AATTACACCA AAACCTTTGA CTGCTCCTGA AAAATTAAAT TCTTTTGAAA TTTATCTAGG	1680
GCTTTATCAG CAACTAACTG GTGAAGATGG AACTGAAACA CATTATCAAA AATTGACAA	1740
AGACTTCTTT GATTTAATCG TAATTGATGA AGCGCACCGT GGTTCAGCTA AGGAAAACAG	1800
TAAGTGGCGT AAGGTAATTG ATTATTTTCAG TTCTGCGACA CAGATTGGGA TGACCGCTAC	1860
TCTTAAGAA ACCAAGAATG CTTCCAATAC GGAATACTTT GGTGAGCCAA TCTATACTTA	1920
TAGTTTAAAA CAGGGAATCG AGGATGGTTT TTTGGCTCCA TATCGTGTTA TGAGGGTTAA	1980
TTTAGATGTG GATGTGGATG GTTATCGTCC AGAACTGGA AAAGTTGATG CTAACGGACA	2040
ATTAATAGAA GATAGGTACT ACGGCAGGAA AGATTTTGAT AAAACCATTG TCATTGATGA	2100
TAGAACGCAA AGAGTTGCCA AGTTTGTTTC TGATTATATG AAGCAAAACA ATGCACGATT	2160
TGATAAAACA ATTGTTTTTT GTGTTGATAT TGACCATGCC GAGCGAATGC GTGCTGCACT	2220
TGTAAGAGAG AATCTAGACT TAGTCCAAGA AGACTATCGT TATGTCATGC AAGTAACTGG	2280
TGACAAACGCT GAAGGAAAAG CTCAACTGGA TAACTTTATG GATGTCAATT CTAATTTTC	2340
CGCTATTGTA ACAACGTCTA AATTATTAAC GACAGGAGTT AATGCTAAAA CATGTCGTTT	2400
GATTGTTTTA GACTCTAATA TCCAATCCAT GACTGAATTT AAACAAATTA TTGGTCGTGG	2460
CACACGTCTT TATCCTCAA AGGGGAAAGA ATTTTTTACG ATTATTGATT TTCGAAATGT	2520
TACCAATTTG TTTGCTGACC CTGATTTTGA TGGTGATCCA GTGAAGGTGC TAGAAACAGG	2580
TGCGAAAACA GTCAGTGGTT CTACGCCCGG TTTCGTAGAT GAGGAAGGTG ACCCAGTAGA	2640
AAAATATATC GTTACAGACA AGCAGGTTAC CATTCTTAAT TCTACTGTTT AAGTATTGGA	2700
TGAAAACGGG AAACGTGATTA CCGAAAGCCT GACCGACTAC ACTCGAAAGA ATATCTTAGG	2760

1011

TAGCTACGCC ACTTTGAACG ATTTTATCAC AGTTTGGCAT ACGGCAGATA AGAAGAAGCT	2820
TATCTTAGAC GAACTTTATA AAAAAGGAGT TTATCTAGAT GCTATTCGAG AGTCGGAGGG	2880
AATATCAGAA CAAGAAATCG ATGATTTTGA TTTACTCCTA AAAGTGCCT ATGGTCAAAA	2940
AGAATTAACC AAAACGGAAC GTATCAATAA ACTCAAACAA AGCGGATATT TATATAAATA	3000
TAGTGAGGAA GCGCGTGCTG TTTTGGAAT TTTACTGAAC AAATACATGG ATAAAGGTAT	3060
TGGAGAAGTC GAAAGCATTG AAACATTAAA ACTTCCAGAA TTTTCAGATAT ATGGTGGAAC	3120
CTTCAAAATC ATCAATACTT ATTTTGGAGA TAAAAACGA TATTTACAAG CAATTAAAGA	3180
ATTGGAGCAA GAGCTATTTA CAGTAGCTTA ATGAAAGGAA AGTATGTCAA TTACATCAT	3240
TGTAAAAAGA ATTCAAGATA TCACTCGAAA CGATGCTGGT GTTAATGGTG ATGCTCAACG	3300
TATTGAGCAA ATGCTCTGGT TATTATTCTT AAAAATTTAT GATAGCCGTG AAATGGTTTG	3360
GGAATTAGAA GAAGACGAGT ATGAGTCAAT TATCCAGAG GAATTAAAAT GCGGAAATTG	3420
GGCTCATGCT CAAAATGGGG AACGGGTATT GACAGGCGAT GAATTACTTG ATTTTGTCAA	3480
TAACAAGTTA TTCAAAGAGT TGAAAGAGCT TGAAATAACT TCAAATATGC CTATTCGAAA	3540
AACGATTGTT AAATCAGCTT TTGAAGATGC GAACAACTAT ATGAAAAATG GCGTCTTGTT	3600
ACGCCAAGTC ATCAATGTTA TTGATGAAGT TGATTTCAAT AGCCCTGAAG ATCGTCATTC	3660
GTTTAATGAT ATTTACGAAA AAATCTTAA AGATATTCAA AATGCTGGGA ACTCAGGAGA	3720
ATTTTATACG CCACGTGCAG CGACTGATTT TATTGCCGAA GTTCTTGACC CAAAAGTTGG	3780
AGAATCAATG GCAGACCTTG CTGCGGAAC AGGAGGCTTC TTGACTTCGA CTCTGAACCG	3840
TTTAAGTAGT CAACGTAAAA CTAGTGAAGA TACCAAAAAA TATAATACAG CTGTTTTTGG	3900
TATTGAAAAG AAAGCATTTC CTCATCTTTT AGCAGTTACA AATCTGTTTC TTCACGAAAT	3960
TGATGACCCT AAAATGTTC ATGGAATAC TTTGGAGAAA AATGTTCTGTG AATATACGGA	4020
TGATGAAAAA TTTGACATTA TTATGATGAA TCCACCTTTT GGAGGGTCAG AATTAGAAAC	4080
AATAAAAAAT AACTTTCAG CAGAATTACG GAGTTCTGAA ACAGCTGATT TATTTATGGC	4140
TGTCATTATG TATCGTTTGA AAGAAATGG TCGTGTGGA GTTATTTTAC CTGATGGTTT	4200
TCTATTTGGT GAAGGTGTAA AAAGTCGCTT GAAACAAAA CTGGTAGATG AGTTCAACTT	4260
GCATACGATT ATTAGGTTGC CTCATAGTGT CTTTGCACCG TATACAGGAA TCCATACGAA	4320
CATTCTTTTC TTTGATAAAA CAAAGAAAAC AGAAGAACT TGGTTTATC GTTTAGATAT	4380
GCCAGATGGT TATAAAAATT TCTCGAAAAC TAAGCCGATG AAGTCAGAAC ACTTCAATCC	4440
TGTTCTGTGAC TGGTGGGAAA ATCGTGAAGA GATTCTGGAA GGTAAGTTCT ACAAATCTAA	4500

1012

ATCATTTACA CCTAGTGAAT TGGCTGAGTT GAATTATAAT TTAGACCAGT GTGACTTTCC	4560
AAAAGAGGAA GAGGAAATCT TAAATCCCTT TGAGTTGATT CAGAATTATC AAGCGGAAAG	4620
AGCAACTTTA AATCATAAGA TTGATAATGT ATTAGCTGAT ATTTTGCAGT TGTGGAGGA	4680
CAAATAATGA CACCAGAACA ACTTAAAGCA AGTATTCTCC AAAGAGCGAT GGAAGGGAAA	4740
TTAGTGCCGC AAAATCCCAA TGACGAACCT GCAAGTGAAT TATTAAAGAG AATTAAAGCT	4800
GAAAAAGAAA AACTTATCAG TGAAGGAAAA ATCAAACGAG ATAAAAAGGA AACTGAGATA	4860
TTTCGTGGTG ATGATGGGAA ACATTATGGG AAGTTTGCTG ATGGAAGCAC TCAAGAAATT	4920
GATGTTCCCT ATGATATTCC TGATACTTGG GAGTGGGTGA GGTTTTCTAC ATTGGTTGAA	4980
ATTGTCAGAG GTGGCTCTCC ACGACCAATC AAAGATTATC TTAATTCTGA AGTAGATGGA	5040
ATAAATTGGA TAAAAATAGG TGATACTGAA AAGGGTGAAA AGTATATAAA TAATGTTAAA	5100
GAAAAATCA AAAAATCAGG GCTTAACAAA ACTAGATTTG TAAAAAAGG TACATTTTGT	5160
TTAACTAATT CTATGAGTTT TGGTAGACCT TATATTTTGA ATGTTGATGG TGCAATACAC	5220
GATGGATGGT TGGCTATTTT GAACTATGAA AACTCATTAA ATAAAGATTA CCTATTCTAT	5280
ATTCTTTTCAT CAAATGAGT TTATTCTCAA TTTCTATCTC TAATTAGTGG AGCTGTTGTG	5340
AAAAACTTGA ATAGTGATAA AGTGTCTTCT ATTCTTATCC CTCTCCCCC ACTATCCGAA	5400
CAACAACGAA TAGTAGAAGC AATCGAATCA GCTTTAGAAA AAGTAGATGA ATATGCTGAA	5460
AGTTATAATA GACTAGAACA GCTAGATAAA GAATTTCCAG ATAAACTAAA AAAATCTATT	5520
CTTCAATATG CTATGCAAGG AAAATTAGTT GAACAAGACC CAAATGATGA ATCAGTCGAA	5580
GTTTACTTGT AAAAAATACG AGCAGAAAA CAAAACTCT TTGAAGAAGG CAAGATTAAA	5640
AAGAAAGATT TGGACATTTT TATTGTTTCC CAAGGAGATG ATAACTCTTA TTATGGGAAT	5700
ATACCTATGA ATTGGGTGTT TATAAAAAATA AAAGATATTT TTTCAATAAA TACAGGTCTT	5760
TCTTACAAGA AGGGCGATTT AAGCATTAAT AATAAAGGTG TTAGAATTAT ACGTGGTGGT	5820
AATATTAAGC CTTTGAATTT TTCTCTGTTG GATAATGATT ACTACATTGA TACACAATTC	5880
ATCTCCTCTG AGCAAGTTTA TTAAAAACAT AATCAGCTAA TAACACCTGT ATCAACCTCT	5940
TTAGAACATA TTGGAAAGTT TGCAAGAATC GATAAAGACT ATGATGGTGT TGTGGCTGGT	6000
GGATTTATTT TCCAATTAAC ACCATTGCGA AGTTCAGAGA TTATTTCAAA ATTTCTATTA	6060
TTTAACTTGT CCTCTCCGTT ATTTTATAAA CAATTGAAAG CAATAACTAA ACTATCAGGT	6120
CAAGCTTTAT ATAATATTC TAAACTACA CTGAGCGAGC TATTAATTCC GTTAGCTCCT	6180
TTTGAGGAAC AGGAACTTAT TACTCAAAA GTTGAGAAAC TTTTGA AAA AGTAAATCAA	6240
CTTTGAAAAT GATTCTTTTC ATCTCTTCAT GATTAGAAAT AGGGATTAAT AATTCGAGA	6300

1013

TACTGGTACT ATTTAATGTT TTCCCTTTGA TAGCATCTTT TGAATCACCT AAAGTAGAGA	6360
TAAGTGGCAA AAATATCATT AAGTAATCTC TGATAATATT TTCTTTATTA GCATAGGGGA	6420
ATATCGATAT AATGGCTTCA TTATGAGTGG CAGGAATATC CAATATGGCA ACTTTTCCAA	6480
TAGATAATTT AAAACTCATT AATAAAGTTC CTTTAGGTGA AATGTCTATT TTCTTTGATT	6540
TTAATGCTAA TTTAGAAATA GATTCTCTCG CATTAGTTAC ATAACCAGAT ATAGGCATAT	6600
CTGATATAGA TACCCAAGGT ATTCAGTTC CCCAAAAAGT AGCTTCACTG CGTGGAGGAG	6660
TTTTCCTAT TCTGAAGTTA ACTAGGCTAG CAAATTTAAT ATATCTCCAT GCTTCTGGGA	6720
TTTCATATAT AGGATAAGAG GTTGTTCGT CTTTGTCCC ATAATAAGAG CCATAATCAC	6780
AAAAATAGCA GGTAGTCAGT TTGACCACCT GTTATTTTTT ACCAATTAAC AATTTTATCT	6840
ACAATATTTT GTTGTTCAGT AGCTGTTTC CTTAGATAAA TTCGAGTAGT TTCTATACTT	6900
TCTGTGCCA TCARAATCTGC AAGCAAGGCA ATATCATTAT ACTTCGCTAA AAAATTCCTA	6960
GCAAAATAAT GCCTAAAAGA ATGAGGGTAA ATTACGTTAG GATTCATTTT GTATTTATCA	7020
GCATAATTTT TTAACGTGTG AGCAACTCCT CTTGCTGTAA TTGGTTCGTT AAATTTATTC	7080
AAAAATAAAT AACCACTTCG GCGATTTTCT GATTCTAACC AACTAAGACA ACTATTTCTT	7140
AATTTTITAG GAATGTACAG TCTACGAATT TTACCACCTT TTGAGTAAAT GTCAAAATAA	7200
CCGATTCTTA CATGCTCTAC TTTTAGTTTA ATAAGTTCAC TTACACGAGC CCCAGTTGCA	7260
CCTAAAAACC AAACGACAAA ATGCCATTTT AAAATACCAT CTTTTTTCAA ACTACGTTTA	7320
AGAAAAAGGT AATCAGCATG GCTAATGACA TCTTCTAAAA ACGGTTTTTG CTGTACTTTG	7380
ACAAATTTTA ATTTCAAATC ATCATGACCA ATAAAAGCCA GATATTTATT TACTCCTTGT	7440
AGTCGCAAAT TGACAGTTT AGGTTTAAAA TTGTCTAATA AATATCCTTT GTATTCAAAT	7500
AAATCTTCCA TTTTGAGTTC GTAATCTCTC AAGAAAAATC GAACACCATA AAGGTACGAA	7560
CGCACAGTAT TTTCAGCTAA ACCAGCTTTC TTCAAATGTA ATTCAAAAATC TTCAACGTA	7620
AAACTCCTAT CTTATGTTTG ATAGAAATTC CACCGCACGT AAAACTATTA TACTAAATTA	7680
GTGCGTCAAT ATGGGCGAAA AATTGTTTGA TTTTATCAAC GATTCTGGAT TGTTACAGGAA	7740
GGGGTGGGAG GGGGATTAAA TATTCTTTTA TAGTTTTCTG TAATAATTCT TTTTGTTTTG	7800
TACTACCCGA CGCTTTTCT TCAATAACTG ACTGAACAAT AGGAGAGGAA AGAAAATTAT	7860
AGATGAAATG GCAATTAATA ACCCCCGATA AGACTCTTAT AACTGTAACA TGGCTATCTG	7920
CAACAGCCCA GCCATAAGGA TTTTATTTT CATGGTAAAT AGCTAATCGT CCTAACGTAC	7980
CTAGACCTGT TGAATTCAC ATTAATCAC CATCTCTTAG TAATCTTTCT TTCTGGTAAC	8040

1014

TATGAACTGT	TTCGGGATCA	ATAAATCTTG	CTAAGTCAAT	AGAAAAGCCA	GACCATTGAT	8100
TACATTTCTG	AGCAATCACA	GGGTATATAG	GAATATTTGA	ATATTTTGGA	GACTTCCCTC	8160
TTTGAATGTA	GGAGGTTATA	TCGTTTAACC	TCACCCATTC	CCAACTTTCT	GGTATTTAC	8220
AAGGTACTTC	CTCATAATAA	GAGTTATCAT	CTCCTGGGA	AACAATAGAA	ATGTCCAAAT	8280
CTTTCTTTTT	AATCTTGCCT	TCTTCAAAGA	GTTTTTGT	TTCTGCTCGT	ATTTTTTCAA	8340
GTAAACTTC	GACTGATTCA	TCATTTGGGT	CTTGTTC AAC	TAATTTTCCT	TGCATAGCAT	8400
ATTGAAGAAT	AGATTTTTTT	AGTTTATCTG	GAAATCTTT	ATCTAGCTGT	TCTAGTCTAT	8460
TATAACTTTC	AGCATATTCA	TCTACTTTTT	CTAAAGCTGA	TTCGATTGCT	TCTACTATTTC	8520
GTGTGTGTTT	GGATAGTGGG	GGGAGAGCAA	TTAATAATAG	ATTAAAATTA	TAATCATTGA	8580
TTGCAGGATA	ACTTGTTC	GATAGTTTAT	TATTAAACAG	ATTGATAAAA	TTATCTGATA	8640
ATAAATAATA	TTTCAAATAT	GTTTCGTAA	GTAAGTATC	CAAAACAATA	AATGCTGTAC	8700
TAGCTATCAA	ATACTCTTTA	AGTTCTCTAA	CTACAGCAAT	ATTTTTTAGA	TATGGTCTAA	8760
CTGTTGAAAA	TAAGACACTA	TTCTGCGAAA	CTAATTTTCT	AGCACGGGAA	GGCGCTTGTT	8820
CAGGTGAAAG	ATATGTAGTA	TTTTTGTAGT	TGATTATGTT	CTTTTTTCTA	TCAATACTAG	8880
ACGTATCTAT	ATACCTAAAG	GATTTCTCTG	GCTTATTTTG	CCCAAATTC	CAATAAATTG	8940
ATTTTATCCT	CACCCACTCC	CAAGTATCAG	GAATATCATA	AGGAACATCA	ATTTCTTGAG	9000
TGCTTCCATC	AGCAAATTC	CCATAATGTT	TCTTATGTGC	TTCAAGTATA	TAAAAAGGCG	9060
TAAAAATACG	CCTATAGATA	ATGGGGTTGA	AATAGGTTTA	TTGTTGATGA	GATTGTAGAT	9120
AATTCAATTT	TTTACTTCCA	ATCGAATATT	CAATCCTCC	ACCTTTTCTG	CCTGTAATTG	9180
TTTCATCATA	AATTCAATAT	CTTCAGGATT	TTCCCTTGG	CAACCTCGGC	AGAAATATTC	9240
TTCCGCTCGA	TCAGGATTCA	AAAATCGACA	AGCACAAACA	AAACAGTCGC	CATCATCATT	9300
TATTGAGATA	ATATAGTAGA	TTGAAATAAG	ATGTAAACAA	ATCGATTAGG	AAAGTTAAAT	9360
TAGTTTCTAG	AAATTTT TAG	CAGATGTAGT	GTAATTTCT	AGTCTCAATT	TACTATGGCT	9420
TCAAAATATAT	CTTTCGAAAA	AATATTTACA	GATGTGTAAT	TTTGAAGCTT	GCAAAAGTTA	9480
GTAAACTTGT	AGATTTTCGAT	TTGAAGTAAC	TTGTTTCTT	GCCCGATATT	GTTTTTGAAA	9540
TTGAATTTTT	CCATAGTGAC	TCCTTAATTT	TCTTCTACAC	GTCTGATGAT	AAATCTAATT	9600
CGCAAAAGAG	TCAAGAGGAT	TTTTCGAAAA	ATAAATAGCG	ACCGAAATCG	CTATTTTAAG	9660
GGTTATAGGT	ATTTGATGGC	TTAGACTGCT	GTGTGACTGT	TTACCCACAG	GCAATCTTTC	9720
TTCTATATTA	GTATTAGTAA	AGGTCTAAAT	AATTATCAAT	TTCCCATTGT	GAAACGAAGG	9780
TTGCATAACT	TGCCCATTCG	ATTCGTTTGG	CTTCAAGGAA	GCTAGTATAG	ATGTGATCTC	9840

1015

CGAGAGCAGC	TTTAACCACT	TCATCTTCTG	TCAAAGCTTT	CAAAGCGTTG	TGAAGAGTTG	9900
ATGGAAGGTC	TGTAATACCA	GCTTCCTTGC	GCTCTTCTGC	TGTCATGATG	TAGATATTTT	9960
CTTCGATAGG	AGCTGGTGCT	TCGATTTTAT	TTTCAATACC	ATACAAACCA	ACTTCCAAAA	10020
GAACAGCCAT	AGCAACGTAA	GGGTTCGCCA	TTGGATCCAC	TGAACGCAAC	TCAAGACGAG	10080
TTCCCATACC	ACGTGAAGCA	GGTACGCGCA	CAAGTGGCGA	ACGGTTACGA	CCAGCCCAAG	10140
CAATGTAAAC	AGGCGCTTCA	TAACCTGGAA	CCAAACGTTT	GTATGAGTTA	ACTGTGGGT	10200
TCATGATGGC	AGTATAGTTG	TAAGCATGCT	TGATCAAACC	GCCTAGGAAA	TGGTAAGCTG	10260
TTTCTGACAA	CTGCATTCTT	TTTGGATCAT	TTGGATCAAA	GAAGGCGTTA	TTTCCTTCTG	10320
CATCAAACAA	GGACATATTA	CAGTGCATAC	CTGATCCAGC	AATACCAAAT	TTTGGCTTCG	10380
CCATAAATGT	TGCGTAAAGT	CCGTGTTTGC	GAGCAATGGT	TTTAACAACA	AGCTTAAAGA	10440
TTTGAATCTT	ATCACAAGCA	CGGAGAACTT	CATCGTACTT	AAAGTCAATC	TCATGCTGTC	10500
CAACCGCAAC	CTCGTGGTGA	CTCGCTTCTA	CTTCAAATCC	CATTTTGGTC	AAGACATTCA	10560
CAATCTCAGC	ACGTGTGTTG	TCCGCAAGGT	CAGTAGGTGC	CAAGTCAAAG	TAGCCACCCT	10620
TGTCATTCAC	TTCAAGTGTT	GGGTCCCAT	TTTCATCCAA	CTTAAATAGG	AAGAATTCTG	10680
GCTCTGGACC	AAGGTGAAG	GATTTGAATC	CAACTTCTTC	CATGTGACGA	AGAGCTCGTT	10740
TCAAATTACC	ACGAGGGTCA	CCCGCAAATG	GTTACCTTC	TGTTGTATAG	ACATCACAGA	10800
TCAGACCTGC	AACACTTCCA	TTTTCATCTC	CCCAAGGGAA	GACTGTCCAT	GTATCCAAGT	10860
CCGGGTACAA	GTACATATCC	GACTCATTGA	TACGTACAAA	ACCTTCAATA	GAAGATCCAT	10920
CAAACATAAC	CTTGTTTCGAC	AAGACCTTAT	CTAACTGTTT	ATCTGTAGCA	GGAATTTTCA	10980
CGTTTTTCAT	GGTTCCTCAA	ATATCTGAGA	ACATAAGACG	AATAAAGGTA	ACATTTTTTT	11040
CCTTGACTTC	ACGACGAATA	TCTGCAGCTG	TGATTGGCAT	AAGTTTTCTC	CTTAATCTAT	11100
GACTACTTGC	GGTTGCCTAA	CCGCGACCAA	AAGGTGACTG	TACTGAAGCA	AAACGCCCCCT	11160
GTTGGAGGAG	TTCATTGTGA	AGTGCACGAC	GTACTTCAGT	CTGACTAACC	GCTTCTTTGG	11220
ATTTTCGCTC	ACGTTTCAGCA	TATTTTTTCT	TAATGGCAGC	GATATTATAA	CCTTCAGAGA	11280
TATAATCTTT	GATTTCAAGC	AGACGATCCA	TGTCATTCAA	GGAATACATG	CGACGATTTT	11340
CTTCGTTCG	ATCGGGCTTG	ATCAACTCTT	GATCTTCATA	ATAACGAATC	TGACGCGCCG	11400
ATAGATCGGT	CAACTTCATA	AACTGCGCA	TAGGAAAAAC	AGCCATATTT	CGGCGAAATT	11460
CTTTTCCTT	CATTTACAAT	TTCTTCTT	CTGTCTATTA	TAGTCTAAAA	AAAGACAAAC	11520
GTCAATTGAT	AATGTTATAA	AATGTAACAT	TATTTTTCTT	TTTCTCTAA	AAAGAGACGA	11580

1016

ATACGATCAA	TATCGTAATT	TACGATAATT	GCGACAAAAA	CTCCCATAAA	CGTTTCTAAT	11640
ACACGCACAA	ACACGTACAA	AATTGTCTCA	CCACTTGGAA	TTGATAGGGT	AATGATTAAAC	11700
ATAGCTGCTA	CACCACCAAT	AACCCCTGCT	TTGTTATTCA	TGGCTACATT	TGTCATAATG	11760
GTTAACATGG	TGCAGATTGG	AACAAC TACC	AAGGTCACCC	AAAAGGCTTC	GTGGAAAAAG	11820
GTATTTAATA	AGAAGAAGAC	CAAGGCATAG	AGTCCACCGA	TACTATTTC	TAGAATACGC	11880
GAAGTCCCAA	AATGAACACT	CTCATCAAAA	CTCTCCCTCA	GGCTAAAAAC	GGCTGTCAAA	11940
GCACCAATTT	GAAGACCTTT	CCAGCCAAAA	AAGCCAAAAA	TCAAGAGAAC	TAGAAAAACA	12000
GCAATACCTG	TTTTAAAGGT	TCGCATACCA	AGTTTGAAC	GGGATTATC	GAATTTATAT	12060
TTTTTAAAT	AAC TCATAAT	CTCAACTTTC	TATTTCCATT	TTATCATAAA	TCGGTGATTT	12120
TTATGAGTAA	TAGTTGAGAG	GAAGCGTTTT	TATTTTAAGC	AAAAGAAAAG	AGGAAC TTTC	12180
ATCCCTCTCT	TCTTTGATTT	ATTTATAAAA	TCTTATTTTT	CTGTCAAGGC	TGCAAGTCCT	12240
GGAAGAACCT	TACCTTCAAG	AAGTTCCATT	GATGCTCCAC	CACCCG TACT	AATCCATGAG	12300
AACTTG TCTG	CACGGCCAAG	GTTAATCGCT	GCGGCAGCTG	AGTCACCACC	ACCGATGATT	12360
GATTTAACTC	CTGGTTGTTT	CACGATAGCG	TCCATCACAC	CGATTGTACC	AGCTTGGAAG	12420
TCTGGGTTTT	CAAATACACC	CATAGGTCCG	TTCCATACGA	CTGTTTGGC	ACCAGTCAAA	12480
GCTTCGTCAA	ATTTGGCGAT	AGATTTTGGA	CCGATGTCAA	GACCAAGGAA	GCCTTCAGAA	12540
ACTGCTTCAC	CTTCAGTGTC	ACGCACTTCA	GTGTAACCAG	CAAATGCGTT	AGCTTCTTTT	12600
GAGTCAACTG	GCAAGATCAA	TTTACCATTT	GCTTTTTCAA	GAAGAGCTTT	CGCAACATCC	12660
AATTTGTCTT	CTTCTACAAG	TGAGTTACCG	ATTCGATAC	CTTGTGCTTT	GTAGAATGTG	12720
TAAGTCATCC	CACCACCGAT	AAGGACGTTA	TCAGCTTTTT	CAAGCAAGTT	TTCGATAACA	12780
CCGATCTTGT	CTGAAACTTT	TGAACCACCA	AGGATAGCCA	CGAATGGACG	TTCTGGAGTT	12840
TCAACTGCTT	CTTGGATGTA	GGCAATTTTCG	TTTTCAAGAA	GGAAACCAGC	AACTGCTTTT	12900
TCAACGTTTG	CTGAGATACC	AACGTTAGAT	GCGTGTGCAC	GGTGAGCTGT	ACCGAATGCA	12960
TCGTTTACGA	AGATACCATC	TCCAAGTGAT	GCCCAGTATT	TACCAAGTTC	AGGATCGTTT	13020
TTAGATTCTT	TCTTGCCGTC	AACATCTTCG	TAACGAGTGT	TTTCAACCAA	GAGAACTTGT	13080
CCATCTTCAA	GAGCGTTGAT	TGCCGCTTCT	AATTCAGCAC	CACGAGTGAC	ACCTGGGAAA	13140
ACAACATCTT	GACCAAGTTT	TGCTGCCAAG	TCAGCTGCTA	CAGGAGCAAG	TGATTTACCA	13200
GCTTTATCAG	CTTCTTCTTT	CACACGTCCA	AGGTGAGAGA	AAAGAATTGC	ACGTCCACCT	13260
TGTTTCGATGA	TGTACTTAAT	AGTTGGAAGA	GCTGCTGTGA	TACGGTTATC	GTTAGTGATT	13320
ACGCCATCTT	TCAATGGTAC	GTTGAAGTCA	ACACGAACGA	GGACTTTTTT	ACCTTTCAAG	13380

1017

TCAACGTCTT TAACAGTAAG TTTTGCCATG TTACAAAAAC TCCGG

13425

(2) INFORMATION FOR SEQ ID NO: 152:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 905 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

GATTTATCCT ACCGnGAAT TTCCGGAGGG GTTCTAGCAG CAATCTTAGG AATCTATGAA	60
CGAATGATTG GCTTTCTGGC CCATCCCTTT AAAGACTTTA AAGAAATGT TTTGTAATTT	120
ATTCCAGTTG CCATCGGTAT GCTTCTGGGA ATCGGCTTAT TTTCTACCC GATTGAATAC	180
CTGCTTGAAA ATTATCAGGT TTTTGATTA TGGAGCTTG CGGGAGCTAT TATCGGTACA	240
GTTCTAGCC TCCTCAAAGA ATCAACTCGA GAATCTGACC GAGACAAGAT TGATTAGCT	300
TGGTTATGGA CAACCTTTAT CATTTCTGGA TTAGGACTCT ATGCCTTAAA TTTGTCGTT	360
GGAACCTTAA GCGCCAGCTT TCTTAACCTC GTCCTAGCAG GCGCACTATT GGCCCTGGC	420
GTCTTGGTTC CTGGCCTCAG CCCATCAAAT TTACTTTTGA TTTTGGGACT CTATGCTCCT	480
ATGTTGACTG GTTTTAAAC TTTTGATTTC TTGGGAACCT TCTTTCCGAT TGGAATTGGT	540
GCAGGTGCAA CTCTCATCGT TTTTCAAAA TTGATAGATT ATGCCTTAAA CAACTACCAC	600
TCACGCGTCT ATCATTTTAT CATCGGTATC GTCCTATCAA GTACCCTTTT GATCTTAATT	660
CCAAATGCAG GAAACGCTGA AAGTATCCAA TACACAGGAC TTCACTTGT CGGTTATGTC	720
ATCATCGCCT TCTTCTTTC GCTGGGAATC TGGCTTGGTA TTTGGATGAG TCAATTGGAG	780
GATAAATATA AATAATGGCA AAAAAAGTTA AAATCAAAAA AACATTGGTG GAACAAATCC	840
TATCTAAAGC AGCTATCCCT CATCAGGGGA TTCAAATCAA TGCCCTAGAA GGAGAGCTTC	900
CTCAA	905

(2) INFORMATION FOR SEQ ID NO: 153:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 4278 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

1018

CTTGAATTAA ATAAAAACG TCATGCGACT AAGCATTTTA CTGATAAGCT TGTGTATCCC	60
AAAGATGTGC GTACGGCTAT CGAAATTGCA ACCTTAGCGC CAAGCGCCCA CAACAGCCAG	120
CCTTGGAAT TTGTGGTGGT ACGTGAGAAA AATGCTGAAC TGGCAAAGT AGCTTATGGT	180
TCCAATTTTG AACAGGTATC ATCAGCGCCT GTAACCATTG CCTTGTTTAC AGATACGGAC	240
TTAGCCAAAC GTGCTCGTAA GATTGCCCCG GTTGGTGGTG CTAATAACTT TTCTGAAGAG	300
CAACTTCAAT ATTTTATGAA AAATCTGCCA GCTGAGTTTG CCCGTTACAG TGAGCAACAA	360
GTCAGCGACT ACCTAGCTCT CAATGCAGGT TTGGTTGCCA TGAAC TTGGT TCTTGCATTG	420
ACAGACCAAG GAATGGTTC TAACATTATT CTGGTTTGGT ACAAATCAA AGTTAATGAA	480
GTTTTGGAAA TCGAAGACCG TTTCCGCCA GAACTCTTGA TCACAGTGGG TTATACAGAC	540
GAAAAATTGG AACCAAGCTA CCGCTTGCCA GTAGATGAAA TCATCGAGAA AAGATAGAAA	600
GAAGAAAAA TGACAGCAAT TGATTTTACA GCAGAAGTAG AAAACGCAA AGAAGACCTC	660
TTGGCTGACT TGTTAGCCT TTTGGAAATC AATTCAGAAC GTGATGACAG CAAGGCTGAT	720
GCCCAGCATC CATTGGGCC TGGTCCAGTA AAAGCCTTGG AGAAATTCCT TGAATCGCA	780
GACCGCGATG GCTACCCAAC TAAGAATGTT GATAACTATG CAGGACATTT TGAGTTTGGT	840
GATGGAGAAG AAGTTCTCGG AATCTTTGCC CATATGGATG TGGTGCCTGC TGGTAGCGGT	900
TGGGACACAG ACCCTTACAC ACCAACTATC AAAGATGGTC GCCTTTATGC GCGCGGGGCT	960
TCGGACGATA AGGGTCCTAC AACAGCTTGT TACTATGGTT TGAAAATCAT CAAAGAATTG	1020
GGTCTTCCAA CTTCTAAGAA AGTTCGCTTC ATCGTTGGAA CAGACGAAGA ATCAGGCTGG	1080
GCAGACATGG ACTACTACTT TGAGCACGTA GGACTTGCCA AACCAGATTT CGGTTTCTCA	1140
CCAGATGCTG AATTTCCAAT CATCAATGGT GAAAAAGGAA ATATCACGGA ATACCTCCAC	1200
TTTGCAGGAG AAAATACAGG TGTGCCCCG CTTCACAGCT TTACAGGTGG TTTACGTGAA	1260
AATATGGTAC CAGAAATCAGC AACAGCAGTC GTTTCAGGTG ACTTGGCTGA CTTGCAAGCT	1320
AAACTAGATG CCTTTGTTGC AGAACACAAA CTTAGAGGAG AACTCCAAGA AGAAGCTGGC	1380
AAATACAAGG TGACGATCAT TGGTAAATCA GCCCAGGTG CTATGCCTGC TTCAGGTGTC	1440
AATGGCGCAA CTTACCTTGC CTTCTCCTC AGCCAGTTG GCTTTGCTGG TCCAGCCAAA	1500
GACTACCTTG ACATCGCAGG TAAAATTCTC TTGAACGATC ATGAGGGTGA AAATCTTAAG	1560
ATTGCTCATG TGGATGAAAA GATGGGTGCT CTTTCTATGA ATGCCGGCGT CTTCCACTTC	1620
GATGAAACAA GTGCTGATAA TACCATTGCC CTCAACATCC GCTATCCAAA AGGAACAAGT	1680
CCAGAACAAA TCAAGTCAAT CCTTGAAAAC TTGCCAGTTG TTTCTGTAG CCTGTCTGAA	1740
CACGGTCACA CGCCTCACTA TGTGCCAATG GAAGATCCAC TTGTGCAAAC CTTGTTGAAT	1800

1019

ATCTATGAAA AACAACTGG CTTTAAAGGT CATGAACAAG TCATCGGTGG TGGAACCTTT	1860
GGTCGCTTGC TAGAACGCGG AGTTGCCTAC GGTGCTATGT TCCCAGACTC GATTGATACC	1920
ATGCACCAAG CCAATGAATT TATCGCCTTG GATGATCTTT TCCGAGCAGC AGCAATTTAT	1980
GCCGAAGCTA TTTACGAATT GATCAAATAA AACGATAGAA GTCTGAGATC TTATGCTTGG	2040
ACTTCTTTT GGAGGAAAAG TAGATGTCTC AAATCGAAAAG AATCAAACAG GCTATCATGG	2100
CGGATTTCGA GAATGCCAGC TATACAGAGC GTGGCATTGA GCCTCTCTTT GCAGCGCCAA	2160
AAACTGCTCG CATCAATATC ATCGGTCAGG CTCCGGGACT TAAAACTCAA GAAGCAGGCC	2220
TTTACTGGAA AGATAAAAGT GGTGACCGCT TCGGGGACTG GCTAGGTGTG GATGAAGATA	2280
CCTTTTACAA TTCAGTTAT TTTGCTGTTT TGCCTATGGA TTTCTACTTT CCAGGACATG	2340
GCAAGTCGGG TGATCTTCCG CCTCGTACAG GTTTTGCAAG AAAATGGCAT CCGCAGGTCT	2400
TACAGGAATT GCCTGATATT CAGTTAACCC TCTTGATTGG GCAATATGCC CAAGCCTACT	2460
ATTTACAGGA GAAAATCAGT GGAAGGTAA CGGAGAGGGT GAAACACTAT AAAGACTATC	2520
TGCCAGCCTA TTTTCCGCTA GTTCACCCAT CACCACGAAA TCAAATCTGG ATGGCCAAAA	2580
ATCCTTGTTT TGAGGCAGAA GTAGTGCCAG ATTTGAAAAA AAGAATTAAA ACCATTTTAT	2640
AGTCAATGAA AATCAAAGAG CAAACTAGGA AGCTAGTCGT AGGCTGCTCA AAGTACAGCT	2700
TTGAAGTTGC AGATAAACT GACGAAGTCG GTAACATACG CACGGTAAGG CGACGCTGAC	2760
GTGGTTTGAA GAGATTTTCG AAGAGTATTA GAAGAAAAAG AATGAAAGAA ATAGCCTTTG	2820
ACGCATTTTA CCAGCTTTAC CAAAACGACC AGCTTCTTTT AGTGGATGTG AGAGAAGTGG	2880
ATGAGTTTGC AGCTCTTCAT TTAGAAGGTG CCCACAACCT ACCGCTTAGT CAATTGGCTG	2940
ATAGTTATGA TTAATTGGAC AAAGATCGCT TGCATTATAT TATTTGCAAA TCTGGAATGA	3000
GATCGGCGCG TGCTTGCCAA TTCCTATTAG AACAAGGTTA TAATGTTATC AATGTCCAGG	3060
GTGGCATGTT AGCCTTTGAA GAACTTTAAA ATTTTGCAAT TCTCCTACTT GGTGTGGACT	3120
GGGTAGGAGA GTTTTATTTT TAGATAATTC TTATTTTAA GAAAATTGAA AACATTTAAT	3180
ATTTGCCTCG TGATGCTTTT TTCAGACTCC TAATCGTGGT ATACTAGGTC AGTATTTTAT	3240
AAATATGAAG GAGATTTTTA TGGCTAAAAA AGGTACCCTA ACAGGTTTGC TCCTGTTTGG	3300
AATATTTTTT GGTGCGGGGA ACTTGATTTT TCCGCCTTCT CTAGGTGCTC TATCTGGAGA	3360
ACATTTTCTT CCTGCCATCG CAGGTTTGT CTTTTCAGGC GTTGGTATCG CCGTCTTGAC	3420
CCTTATTATT GGAACGCTAA ATCCTAAAGG ATATATCTAC GAGATTTCAA CGAAGATAGC	3480
GCCTTGTTT GCGACTCTT ACCTCTCAGT TCTTTACTTG TCAATCGGTC CATCTTTGTC	3540

1020

TACCCACGT ACTGCTACAA CAGCTTACGA AGTAGGGATT AGCCCCCTTT TGTCGGATGC	3600
AAATAAAGGA CTGGCTTGA TTGTATTAC GGTTCGTAT TTTGCGGCAG CCTATTGTAT	3660
TTGCTTAAT CCATCAAAAA TCTTAGACCG CATTGGACGT ATTTTAACGC CAGTCTTTGC	3720
AATTTTGATT GTTATCTGG TCGTCTGGG AGCTATCAAA TATGGTGAA CAAGTCCTCA	3780
AGCTGCTTCA CTGCTTATCA AGCTTCTGCC TTTGGTACAG GTTTCCTAGA AGGTTACAAT	3840
ACCTTGGACG CCCTTGCCTC AGTGGCCTTT AGCGTAATCG CAGTTCAAAC CTTGAAACAA	3900
CTTGGATTTT CAAGTAAGAA AGAATACATT TCAACTATTT GGGTTGTTGG TATCGTTGTT	3960
GCCCTTGCCT TCAGCGCTCT TTACATCGGT TTAGGTTTTT TGGAAATCA TTTCCAGTA	4020
CCAGCTGAAG CGATGAAGGG TGAACACCA GGTGTTTACA TCTGTGACA AGCCACTCAA	4080
GAAATCTTTG GCTCAACAGC TCAACTCTTC CTGTCAGCTA TGGTTACCGT AACCTGCTTC	4140
ACAACGACTG TTGGTTTGAT TGTGTCAACA GCTGAGTTCT TTAATGAGCG CTTCCCACAA	4200
ATCAGCTACA AGGTTTATGC GACAGCCTTT ACCTTGATTG GATTTGCTAT TGCCAATTTG	4260
GGTCTTGATG CGATTATC	4278

(2) INFORMATION FOR SEQ ID NO: 154:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 1953 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

ACCCGATCAA ATGACAAAAG CTAACCTTGG TGTCGTAGGT ATGGCCGTAA TGGGTCGTAA	60
CCTTGCCCTT AATATTGAAT CTCGTGGTTA CACAGTTGCT ATCTACAACC GTAGTAAAGA	120
AAAAACGGAA GATGTGATTG CTGCCATCC TGAAAAGAAC TTTGTACCAA GCTATGACGT	180
TGAAAGTTTT GTAAACTCAA TCGAAAAC TCCTCGTATC ATGCTGATGG TTCAAGCTGG	240
ACCTGGTACA GATGCTACTA TCCAAGCCCT TCTTCCACAC CTGACAAGG GTGATATCTT	300
GATTGACGGA GGAAATACTT TCTACAAAGA TACCATCCGT CGTAATGAAG AATTGGCAAA	360
CTCTGGTATC AACTTTATCG GTACTGGGGT TTCTGGTGGT GAAAAAGGTG CCCTTGAAGG	420
TCCTTCTATC ATGCCTGGTG GACAAAAGA AGCCTACGAA TTGGTTGCGG ATGTTCTTGA	480
AGAAATCTCA GCTAAAGCAC CAGAAGATGG CAAACCATGT GTGACTTACA TCGGTCCTGA	540
TGGAGCTGGT CACTATGTGA AAATGGTTCA CAATGGTATT GAGTACGGTG ATATGCAATT	600
GATCGCAGAA AGCTATGACT TGATGCAACA CTTGCTAGGC CTTTCTGCAG AAGATATGGC	660

1021

TGAAATCTTT ACTGAGTGGG ACAAGGGTGA ATTAGACAGC TACTTGATTG AAATCACAGC 720
 TGATATCTTG AGCCGTAAAG ACGATGAAGG CCAAGATGGA CCAATCGTAG ACTACATCCT 780
 TGATGCTGCA GGTAACAAGG GAACTGGTAA ATGGACTAGC CAATCATCTC TTGACCTTGG 840
 TGTACCATTG TCACTGATTA CTGAGTCAGT GTTTCACGCG TACATTTCAA CTTACAAAGA 900
 AGAACGTGTA CATGCTAGCA AGGTGCTTCC AAAACCAGCT GCCTTCAACT TTGAAGGAGA 960
 CAAGGCTGAA TTGATTGAAA AGATCCGTCA AGCCCTTTAC TTCTCAAAA TCATTTTATA 1020
 CGCACAAGGA TTGCTCAAT TGCCTGTAGC CTCTAAAGAA AACAACCTGA ACTTGCCATT 1080
 TGCAGATATC GCATCTATCT GCGTGATGG CTGTATCATC CGTTCTCGTT TCTTGCAAAA 1140
 GATTACAGAT GCTTACAACC GCGATGCAGA TCTTGCCAAC CTTCTTTTGG ACGAGTACTT 1200
 CTTGGATGTT ACTGCTAAGT ACCAACAAGC AGTACGTGAT ATCGTAGCTC TTGCGGTTCA 1260
 AGCAGGTGTG CCAGTGCCAA CTTTCTCAGC AGCTATTACT TACTTTGATA GCTACCGTTC 1320
 AGCTGACCTT CCAGCTAACT TGATCCAAGC ACAACGTGAC TACTTTGGTG CTCACACTTA 1380
 CCAACGTAAA GACAAAGAAG GAACCTTCCA CTACTCTTGG TATGACGAAA AATAAGTAGG 1440
 TCAGCCATGG GGAAACGGAT TTTATTACTT GAGAAAGAAC GAAATCTAGC TCATTTTTTA 1500
 AGTTTGGAAC TCCAGAAAGA GCAGTATCGG GTTGATCTGG TAGAGGAGGG GCAAAAAGCC 1560
 CTCTCCATGG CTCTTCAGAC AGACTATGAT TTGATGTTAT TGAACGTTAA TCTGGGAGAT 1620
 ATGATGGCTC AGGATTTTGC AGAAAAATTG AGCCGAACTA AACCTGCCTC AGTCATCATG 1680
 ATTTTAGATC ATTGGGAAGA CTTGCAAGAA GAGCTGGAAG TTGTTACGCG TTTTGCAGTT 1740
 TCATACATCT ATAAGCCAGT CCTTATCGAA AATCTGGTAG CGCGTATTTT GCGCATCTTC 1800
 CGAGGTCGGG ACTTCATTGA TCAACACTGC AGTCTGATGA AAGTTCCAAG GACCTACCGC 1860
 AATCTTAGGA TAGATGTTGA ACATCACACG GTTTATCGTG GTGAAGAGAT GATTGCTCTG 1920
 ACACGCCGTG AGTATGACCT TTTGGCGACA CGG 1953

(2) INFORMATION FOR SEQ ID NO: 155:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6474 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

CCGGCAGTAC ACGAGCTTGG GGAACAGCCA CTGGAACGAT GAGGTGTGAG CTCAAAATAT 60

1022

CCTCCAGTTA TGTTTTTCCT AATAGTATAC CGGAAGAGTG AAAGGATTTT ATAATGGAGC	120
GGTTACAAAG AACCTACTTT CTATTAAACA GTATACTATG AAAATGTGAA AATTTAACAT	180
TTTTTTGTAC AAATTTTATA AATTATTGCC TTTTAAATAT CAATAGTTAA TCTCTTATCC	240
AGATCCCCCT TGTGTAAACT TTATCTTTAT AAGCTTCAAG GCCCTATCC CATCTATTTG	300
CAACAATTAG ATCACTTTGT TTTGTAAATA GTTCAAAATT CTTTTCATA ATTACGTTAT	360
CTATACTAAC GTTTAAATTT GGTTCATATA CTAAAATTTT TATACCGACA ATCAATAGTT	420
CATTAATTAT ACTTAAATA GCTGACTCTT TGAATTATC TGAATTATAT TTCATCCCCA	480
ATTTATATAT TCCTACTATC TTTGGCTTTC GTTCCAATAT TTGTTTAACT ATGAAGTGT	540
TTCTATTTGT GTTTGAAATA TCAATCGCTT CTATCACTGG GGCATTTATT TCTATAAATT	600
CTTTTTTTTAA TTGTTTAGTA TCTTTGGGAA GACAATATCC TCCAAATCCA AAAGAAGGAT	660
TATTATAAAA ATTTCCAATT CTTGGATCTA AACAAACACC TTTTATTACA ACTTCAGCAT	720
TTAAGCTTCT CCTCTCAGCA AAAGAATCTA GTTCATTAAA AAAGCAACAC GGAGAGCTAA	780
GAATGTGTTA GAAAAAGCT TAATTGCTTC TGCTTCAGTA GGAGAACTA ACATAACATT	840
TTTAATATTG GCAGTACTAT GAGTACTAAT CGAAAGGAAC AACTCTGCAA TTTTCTTCC	900
TTCAACTGTC TCATCTCCAA CAACTATGCG ACTTGGATAT AAATTATCAT ATATAGAACA	960
ACCTTCTCTC AAAAATTCAG GGACAAAAAT GATATTTTTT GTATCAAACA GCCTTTTTTAA	1020
TTTGTTTTGA AAGCCGATCG GAACTGTGA CTTTAAATA ATCTTTCCAT TAGGTTTTAC	1080
CCTCAGAATC TTCGATACCG TTTGTTGAT TTCATATGTA TTAAACTAC CAATTTCTC	1140
ATCATAATCT GTCGGAAGCG CAATAATATA ATAATCAATA TTATTTTAA TTTCAGAAAA	1200
TGTATCAAAA AAAGTAATAT TTAAGTTATT CTCGCAAAAA AACTTCATAA GCTCTTCATT	1260
TTTAGATGGA AGAATGCCCT TTTTAAAT ATTATTTTTT ACAGAACTA TATCATATGC	1320
AACAACCTTA TATTTAGATG CAAATAGTAA CGCGTAGGCC AGCCCAACAT GCCCAAACC	1380
AATTACTGCT ATATTCATAA AACTACTTCC TTATTTCTTA ATCCAAAATC TAATAGAA/A	1440
AGCTGCCCCA TTCCTFAAAT ACAACTCTTT AATATTGTTT AAAAGTTTTT CAACTGATTT	1500
CCAGATTATC AAAATCTGAG ATTTATAGCA CAATATTGAT GATATTCTAT CAATATAATT	1560
TTTTTCATCA AGTTCCTCTT GATACATTTT TAATCTTTA GTTTTCCCA TATAACTAAC	1620
CATACTACTA TCACTTACAT ATGGGAAGTC CTCATAATAT ATTACTTTAT AACGCATAAA	1680
TTCAAGCGCC CTTCCAATAC TATTCACAAA AACATGAGCA ACATGGTCAC CAAGTGAAAG	1740
CGGACAATAT ACGACACATT TGTCGTCTAA ATGCATTAAC AGCTCTTTTA TGATATCATT	1800
CTTTAATGTG TCCTCATTTT TTAATTCAT ATAGATATGA CGGTATAGAA AATTGCCATT	1860

1023

TCTATCTTTC CTATAGAGAC ATTCATAGTA CGATAAGTGT CTAAAAATCAC ATTGTAGACG	1920
TTCACAAGCT AACCTGTCTT CTTCTTCCTT TTCTTCAATC GGATATTTC CAAGGTTACA	1980
CAACTTATGA AATTGCTTAG CAGAGGGCTG TAGCTGTTGG CTCAAAGGGT AACCAGAAAA	2040
TATAGTAATA ACAAGTACAA TTTCTCCTTC TGAAGTTAAT TTTGAAATAT AATCACCACA	2100
GGAAAAAATT GCGTCATCTA AATGTGGAGA TAAAAAGATA TACTTAGTAT TGTTACTCAT	2160
AACCATTCCC TCTACAATT ATCTAAAAAC TCACTAAGTG TCTGATTAAA TTCCACATCA	2220
TCAAAAAAAT TCACCTTATT CTTAATAATG AATATTTCTG TAAATAAACA TATATATAAA	2280
TATTTCAATA TCCTTTCAAT ATCATCCTCT AAATTCCTCT CAATATTTTG TATCAGCCCA	2340
TTTACAATCT TATTAAAAA GATAAGCTCT TTATCTCTAA AATTAAATAT TTTCATACAA	2400
CTGTTGTATC GAAAAATATA TAAAAAATT TTTACTAATG TTTGAATATT TAAACAATA	2460
AATAAATGAG TTGTACCCGG GACACTATTT ATGTTATCAA GAACACTATC TTGAAACCTC	2520
AACTCACAGT TCTTTTGTG AAATTCCTTT TTATCGTTTA GATCTGATAT TTTTTTAGAC	2580
ATTTCAACAA TCTCAGACAT TTTATATGGA TATCTAGGAT GAATGCCAAA ACTATGCAAA	2640
ATGAACTGCA CCCCCAAGT TAGACAGAAT AAATCTAACT TTTGGGGTGC AGTTCATAAG	2700
ATTGGGATAT TTTTTTGTAG CTAGAACTAG TAGAAATATA TAGTCAAATA ACAGATACCT	2760
TAAGGGTTTC TCATCTACAT AAAAAATGA TACTTTTTC TCTTCAGTAA TTACCTCATA	2820
AGCTTCACAA TAGAATCTCA TGTTCCTCCT CCCTATATTC TTAAATAAAA TCCTTTGGAA	2880
ATTGATATAT CTTAGTAAAA TATTGTTTAA GTTCCGGATG CGGAGCATGG GTAACAATAA	2940
TGACAGTCAA ATCCTCTCTA TCTAATATCT TACGTTCAAT CGCTAACGAA GTTCTCCTAT	3000
CGATAGCAGA AGTTCCCTCG TCAATTAATA CTATTTCTT ATTTCTAATT AGCCCTCTAG	3060
CTAAAGTAAT TTTTGTGTTG TGCCCTCCTG ACAGTAATCT CCCATCATCA CCAACATAAT	3120
AATCTAAAAT GTTATTAGGA AAATCTTTTA CACTCAAACC AACTTGCTCT AAAGACTGTA	3180
GTATTTCTTC ATCAGTATAA TTTTCTTCCA ATAAAAATAT ATCTCTAATC GTACCTTCAA	3240
ACAAATAAGC TTTTGTATCT ACATATAGAA CATTCGAAAC CATATTTAAA TAGGAGGTTT	3300
TTTTTATATC ATCCCCGAG AATCGCAATT CTCCACTATA ATCTCTCAA AAGCCATTCA	3360
ATAATTTTAA TAATGTAGAT TTCCCGCTTC CACTTTCACC TAAAATTAAA TACTTTTCAT	3420
TACGTTGAAA ACAAAAATTT AAGTTTMTA ATATTTCTTT ATCTCCATAC TTATAGCAAA	3480
TATTTTTTGC TTCATATAAC GGAAATCTC TATTCACCTC ATTTGGTTCG ATATCATTCA	3540
TTTTATTTGA CTCAATTGGA TTAATTGAAT ACAATTTTAA AAAAATAGGC TTCGTACCAA	3600

1024

TAATAGAGGA	TAATTGACCT	CCTAATTCAC	CTAGCGCTGT	AAAAATAACA	CCTGTTAGTG	3660
CTCCTATTGC	TTCAATAGTA	CCAATTTTCA	CTATTCCTTT	TATTGCAAGA	TAGCCTGTTA	3720
AAAAAACGAG	AGATATCTGA	AAAAAATAT	TGAGAAAGAA	GCTAATAGCG	CCTGCTAACG	3780
TTTCTACAGT	TGTCTTTCTT	TGTATAACCA	TCTTTAATAA	AATTCCTGCT	TCTTTAATTT	3840
TCTTAGGCAA	TACATATAAA	AGATTCAAGG	ACGCTAACAC	ATCAAATCCA	TTCAATATAG	3900
TCTCACTAGA	TTTTAAAAA	GCTTCATTTT	GGTTAGTTAA	ATTTAGACTA	ACTTCTCGCA	3960
TTTTCGATGC	AAAGATTTTT	GGTACAAGTA	GCATAATCAT	TAATGAAAAC	AAGGTGGCTA	4020
CAGTCAATGA	CCAATGATAG	TGATTAAGAG	TCACAACGTC	AAATATAGTA	CCAGAAATTC	4080
CTTTTATTAC	TAAAAAAGT	TGTTTAAACG	CCTGATCATT	TAAAGTCTGA	ACATCATTAT	4140
TTAGCCACGA	AAGATATGTT	CCTGATGATT	TACTATGAAA	TTCTTGATAG	GTAGAGTTAG	4200
AGATGTCTGT	GGCAACTCTA	TTTCGAATCT	CTAGATTAAA	CTCTTGGATC	ACTTCAACCT	4260
GATAATTTTT	CACTACCCAG	TCAAGGAATA	TTATCCACAC	CCAGACAATC	ATTTGGTAGA	4320
TTGACAATTT	CAAAAACCGC	TCTAAATTCA	TCGCAATTAA	TTCAATCAAC	ACCAGAGCAT	4380
TAATAGTTCG	TGCATAAATT	AGCAATAATT	GACCAGCAAC	AATAAATATC	GTTAATAAAC	4440
TAAATTTTTT	TATATTTGAT	TTTATAATAG	TATACACAAT	AGTTTCTCAC	TTTCTAAATT	4500
TTAATTGAAC	ATAGTTTTC	TATATACAAT	AGAAAAAACC	AAAATGATAT	AATAACATAT	4560
ATTTCAAAAA	AGAAATTCGT	TAAAAATTTT	TTCTTCTCTT	GCCTTCTTGA	TTACTTTTAA	4620
AGCCTTGCGT	TTGTCTCCTA	TTAATAGTAA	CCGCTTTATG	TTTAAAGAAT	AATATTTCTT	4680
TGTAACCAAT	ATTCTCTCGT	TGAAACTCAA	TAAATTAAAA	TATTTCTTAC	AGTAATTATA	4740
ATATTTCTCA	TCTGCATTAA	TTGTTTTTTG	TGTCACCTCA	GTGATACCGT	TTTCTTTACT	4800
GTGAGCGTAG	TAATTCACCA	AGAATTCTCG	CACTATATCA	ATTTGGTATC	CTTGAACAAG	4860
TAGTTTTAAT	AAAACAACAC	CGTCCTGATG	TGAATCTATT	TTCTCAAAAC	CATTAATTAA	4920
TTCTAGCACC	TCTTTTTTAC	ACAACCAAAA	TGACGTACCT	GCTATATTGT	GAACCATTG	4980
AACAAACAAG	GGATTTCCAA	CAAAATCGGT	CTTCTCCTCT	TCTCGTGATC	CATTTGGATA	5040
AATTATTATT	CCATAACTAC	AAACTAAAGC	TAAATCTTTC	ATTCTACTCT	TTTTAAAACA	5100
AGCCATCAAC	TTTAAATTC	GATCTGGCAT	ATATTCATCA	TCATCGTCTA	AAAATGATAT	5160
ATACTTACCT	CTAGAATTTT	TGATACCTAT	GTTTCTGGCA	TTAGTTGCAC	CTAAATCTTC	5220
ATFACTTAAA	ATTAACCTAA	TTCTATGATT	GGTATAGCCA	AATTGATGGA	TAATTTTATT	5280
TCTTAAATTT	ACATTACTAT	AATTATCATC	AATAATTATA	ACTTCGATAT	TTTTATAACT	5340
TTGATGTAAA	CACTTTTCA	CAGCTCTAAT	CAGAGATTCA	TACCTATTAT	GTGTTGGTAT	5400

1025

TATAATACTT ACTAATTCTT GATCTATATT CCTATCCATG ACTACTCTTC TCTAATAATT	5460
CATCATATAC TCTCATGGTT TCTACAAACA TTTTGTGCAC AGAAAAATGT TTTCTTATTT	5520
TTGATTTACT ATTCTCACCT ATATATTTCA AATACTCAGA ATCATTGAGT AAAAAATTAG	5580
CACAAGCACA CACTCCCTCA ACATCTTCCT TCTCAAATAA AAATCCATCA ACCCTATGTT	5640
CAATAATTTC ACTTAACCCG CCAACATTAC TAGCTAAAAC CGGAGTTCCT TGTGACATTG	5700
ACTCTAAAAC ACACATAGGT ATTCTTCTG TATCAGAAGG AATATACAAT AAATCCGATA	5760
TTTGGTAAAC TATAGTAGCT GGATAGATT CACCAAGTAA CCTGAAATTA TCTCTACATT	5820
TCAAATGGCA AATTTTCTT TCAAAAGCAG CCCACATACT ACCATTTCCTA GCCATAATAA	5880
AAATCACATC TTCTCTGACT AAAAATAATT TTTCTGCAA TTCAAGGAAT CTATCCGGCC	5940
TTTTTTCTGG ATCCAACCTT CCAACATAAC AAATGATTTT TTGTTATTTG GAATACAAAA	6000
TTCTTTTTTA AAGTCTTGAA CACCTACTAC ATCTAAATCG CTATTTGATA CATTAATTCC	6060
GTTATTTATT GCAACTATCT TCTTATTTT TATTATACTC TCCAATCTTT TTTTTCATAG	6120
TTTCAGATAC ACAAATAAAA GCATCTCCCA TAGAATATGT CCAAAAATCA AAATAAGTCA	6180
AGAATTTCCT TTTTAAGTTA TATTCAACCC ATCCATGGCA TGTTATCACT GTCTTAACCT	6240
TTCCAAATCC ATTCTTGTC AAGTTTTTTA ACATATATAA AAAATAATTA GTTGAGTAGC	6300
CATGACAGTG TATAAGTTGG ATTTTAAATA ATTTTAAAT ATTTTAAACG TGTAAGGCAG	6360
TTTCAAAATT ATTTGAACAT TGAGTACAAT CAACATAGGC AATATCTAAA TTTTATAAT	6420
CATCAATAAC CTTGAATCT CTAGATACAA TTATCAAAAT AGGGAATAGA GACA	6474

(2) INFORMATION FOR SEQ ID NO: 156:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 4792 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

TATTTAACGA TTTTTCAT GTCATTCCT CAAAAATAGA ATACCTTATA ATCTTAACAG	60
AAAAAGAGCA TTTACGCCAT TATATGATAT CTATCTCTGT GATAAGTTT TTTTATGGGT	120
AATTTAAAAG ACCAAACGCA AGATGGCAAT CAAGACCACT CCAAAGAGAA CTGTTCCGAC	180
TAGATTGCGG TAGCGAAAGG CTACCAAGC TGTGGAAG ACGGCTAAGA AGTCCAGTCA	240
TTTGATTTGA GGAAGACTGC CAACCTTACC TGTCACCTACG CTTGAAAGAA TCAGGGCAAA	300

1026

GATAATGGAA ACAGGCAAAA ACTTCAAAAA ACGCTCAACA ATCGCAGGCA GGCCTTATA	360
CTTGACCAAG ATGAAGGGAA TCATACGGGG AATCCAAGTC ACCAAGCCAG AGAAAAATAAC	420
TGCTAATAAA AGATACTTAC TGACCATCTA AAACCACCCC CATGCTACAA CCAAGTAGCG	480
TCGCAACAG AACAGCTAGT GACTGAGACA TCACTGTCAA GAGCAAAAAG AAGGACACCG	540
CAACAACCTGC TAGGATAATG AGCAGATTGC GGACAGGAAT CCGTCTTTGC ATAATCTGAA	600
ATTGCGAAGC AAAATACCAA TAAACATCCC AACCAGGGCA AAATCCAAGC CAAAGATTTT	660
TGGATTGGT AGCAGGCCAC CCAGAGCCGT TCCGACTACT GTCCCCACAA ACCAAGCCAC	720
ATAGCTGTTA AGATTGTTTC CGTGCATCCA CATAGGATTT ACCTTGTCTG TATGGGCCAA	780
TTCAACCATC AAAACGCCAT AGGTCTCATC TGTCAAGATA CTAGACATAC CGATATTGTA	840
CCAAAGACTG GTATGACGGA AATAAGTCGA TGCGTGTAAT CTCAACAAAA AGAGACGCAA	900
GTTGATTAGA AAAACCGTCA TAGCAATAGC TGCCACAGGA GCTTGAACCA CAATCAGTGC	960
CAACATGGCA AACTGGGCAC TCCCAGCATA AACAAAGAGA CTCATCAAGC CCATCTCAAC	1020
AGGTGTCACA TAGGGCGCAC CGATAATTCC ACAGGCCAGG CCGATACTGA CATAGCCAAG	1080
AGCCGTGGC ATGGCTGCCT GCGCCCCCTC CTAAATCCT TTTTCTTTCA TCTTTCTCT	1140
CATATTGTCT TAATAATACT CAATGAAAA CAAAGAGCAA ACTAGGAAAC TAGCCGCAGG	1200
TTGCTCAAAA CACTGTTTTG AGGTGCAGA TAGAACTGAT GAAGTCAGCT CAAAACACTG	1260
TTTTGAGGTT GTGGATAGAA CTGACGAAGT CAGCTCAAAA CACCGTTTTG AGGTTGTGGA	1320
TAGAACTGAC GAAGTCAGTA ACCATACCTA CGGCAAAGTG AAGCTGACGT GGTTTGAAGA	1380
GAGTTTCGAA GAGTACAAGT AGGCTGAAAA GAATCCAACC ACAGCATGGA CTATTATATA	1440
GCAGATTGAA ATAAGATGAG AACAAATCGA TTGGGAAAGT AAAATTAATT TCTATAAATG	1500
TTTTAGCAAT TGTTCGTAC TATTTTAGAT TCACTCTATT ATAACACATT CAGAAAAGAG	1560
AAAAAGTCT GTTGATTTTG ACCATCATAA AAAGACTGGC AATCCAGTCT CAAACATATA	1620
TTATAGAAAT TCTCCACTAA ATACTTTCAC GAATATTCAG AAGCATAACA AAGGCAACTA	1680
GAAGAAATAG CAATAAAACA AAGCTAACTG CCAGAGTTCC AAAGCTAGTA GCAATGGTTA	1740
CCAAAGCTAT TGTAAATAAG CTAGGTAAAA CAACCGTAAT GGCACCGATA GAGGATTGAA	1800
CTGCTCCCAT TGACTCCTCA GGTATTGTGTT TAAAAACGAG TTCTTGCAAT CTAGGAGAGA	1860
GAACACCTGC GAAAAAGGCA TCCAAGGTAC TAAAGATGAG AATCCAGTCA AAACGAACTG	1920
TGGCAAATCC TACTAGAAGA AGCAACTGGA TGACAAGTGA GGCATAGAGA GCTGTTTTTA	1980
TGGAAATGGT ATGTTGCAGA TAGCCACTTA CAAGGCTTCC GACAATCAGG GCTGATAATT	2040
CTAGTGTGGC TAACAAGGCA AGAGATTGAC CAGTTTGTA ATTCAAAAAG GGCTGGTTCC	2100

1027

TTAAAAATAG AGTGGAATA GGAACCGTAA CATTTATCAC TGCTTGACTA GTAGAGATAA	2160
TAAACAAAAC CAAGAGCACC TTATTCATAT TCCATATCAA TTTCGATGAT TGGAGCAAAT	2220
GCTGGCAAAA GGATTTTACA GAGAGTCCTT CTTGATAGCT AATCGTTTTT TCTACTTTCA	2280
AGAGGTCACT TTTTATGAAG AGGATACCTA AAAATGCGAT TAAAAAGGTA AGAGCGTTCA	2340
GTAAGGAAAT AAACCTGGATG GATAGAATGC CTAGTAAGAC TCCTCCTAGG ATATTACTGA	2400
TTGTTTTTAC TAAACTAACA GTTGACTGTT TAAAGCCAAT AGCTTCTGCC AGATGGTCTT	2460
GCCCAATAAT TCTAATGAAA ATCGGAGTGA GCATGGCGCC TGAAAAATAA CTCAATGTGT	2520
CAGACAAGAG GTTAATCAGA CAAATAAATG CTACTAGCAA CAAGGAGAAA GACTGCCCTG	2580
AAAGTGATAA AGACACTATA GAGTAAAGCA AAAATTTTGC AAAACTAATG ACTGTGTATT	2640
TCAAGACACG ATGATGTTGA AAATCCGCCA AAACCCCAG AAAGATTGTG AGAACTTGGG	2700
GCAGGGTTTC TGAAATCGTG ATGAGTAAAA TCGCCAAAGG GGCAAAAGAT GCATCTGCCA	2760
CATAATTCAG GAAGGCCAGA TAAAAATCG TATCCCCAAG CGTTGAAATC CACTGGTTGA	2820
TAGTTAATTG CCTAAATCT CTATTTTGAA GAAATACTTT CATCACAACCT CCTTCTTAAG	2880
TTCAAATGGG AATCTTTCCC CAAGGATAGA CCGCGATACT ACTAACAACC AAAATTACAG	2940
TAACATCAAA AGCTGACCAA TGCCATTGTA GACTATATGC AGTCCAATAG GCCAATAAAT	3000
TGACTTTGTC ATTCTAAATA AGACTGCAAA TATAAGACCT CCACCCATAT AGAAGACAAA	3060
GTCTGTCAAG ACCCAACCGT GATTACTAAT GTGCGAGACC CCAAATAAAA CAGCGGAACC	3120
AAGTACATCT AGCCCCATT TCTTTCCTTT TTCCAGAGCA GTCATCACTA ATCCACGATA	3180
AATCATGTCT TCAAAAATGG GACCTGCAAT CACAGGATAA AAAAAATACA TCAAAAATGC	3240
TGTAGCCCCCT GTAAAAGTCG GAGCAGCATG TTGATAAGAA ATTTCAATTC GAGTAGGTGG	3300
GAAAAGAAAA AAGGTAACGA AATTCCAAAC AACAAAAGCA AGCAGAGCTA GGAAGGAATA	3360
GAAAAGATAG GATCCTTTAA ACTTTCTACT ATTGATTTTC TGCCATTTCC CCGACCAAAT	3420
CATAGCAATA AGAGCAAATA AAACCACAAG AAAATTCAAC ATCATATCCG ACAGATAATA	3480
GGCAAAGTCA GATAGCCCAG TAACAAGGTC GCTGCGTAAA ACTAGAACAC TGAACCTCTG	3540
GTCAGCAATA ACTAGTAGAA AAACATAAT AAAGTAGCGG TGTGAGATTA TCTTTTTCAT	3600
ATATCACCTT TCTAATATCC AAATACCAAT AAAGTAACAA TGAGTAAGAA ACTATTCCAT	3660
GAAGCATGCA GAGCTATAGC CCAATAGATG GATCGGGTGT AGCGAAACAT CATAAAAAT	3720
ATCAAGCCCA TTCCAAAATA CTTTATGAAA TCTGTGTTA TCCAACCATA CTGCAAAACA	3780
TGCATAGCGC CAAATATGGC AGCGGAAACA AGAACATCAA GATAGTATCT CTTAACCTTA	3840

1028

GATAAACTTG TCATCAAAAG ACCACGACAA ACAACCTCTT CTGATACAGG TGCATAATA	3900
CTAGTATAAA GTATTGCGT AACAAAATAG CTAATTCCTG TTAAATTGGT GGCTACTTCT	3960
ACGACTGTAC TTCCATTCTG GGTACGAGGA AAGATATAGG TTGTTAGATT TGCCCACACG	4020
AACAATAAGA AAAAAGAAAG AAGGAAAACA CCCAGGTAAG ACCAACGAAA CTGGAACGA	4080
CCCACTCTT TCCAATGTT ACTTTTGACA AAAGCAATTG TAGCTATAGT TCCCAGAATA	4140
AGTACCAATA AAACCTGGAA CACATAGTAC ATATTATCAG ACAAGCAAC CATAAAATCT	4200
AAGCTGATG TGACATTAAA AATGAGGTAA TAAGTCAAAA TCAACAAGCC AGTTGCTAGG	4260
TGAAATTTCA CTCTTTTCAT TTTCTTCATC CTATTATCTC CTATAAGAGC CTATCTTCTA	4320
CGGCGGCCAA ACAATCCATC TGCTAAATCT ATAGTCCAAT CAAAAGCTCC ACGATTAGGA	4380
CTCATCCCTT GATTGCCCCA ACCAGGGTAA ATTCCTGGGA CGCCCCAACC AGATATACCA	4440
CTTCTCCAC CACCTCCCAT AGAATTTACG AGGTTGCCTC CTCTAACATC TTGCAACTCA	4500
GCTTCTGTCA ATTCCATTGT TTCTGCAAAT TGTAATTTA ACATCTTTTA CACTCCTTCA	4560
ATTATCTTCA TTTGTAAACC ACTTCTGCGA CCTAGGATTT GCTTCAAGTG CTTTACAAGT	4620
ACAGTATAAC ACGAACATTG GCTTATTTA GAAATCGCA TATTTGATAT TTTTCTTAT	4680
AGAAATTTCA GATTTGCGAT TTTGGTGAAT TTGATTACTT CTCTGGTATA ATAAAGTTAC	4740
TACTAATGAG GAGTGGAGAA ATATGAAGAA ACAAATTTTA ACATTATGA AA	4792

(2) INFORMATION FOR SEQ ID NO: 157:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 2156 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

CCGTTCTCGG CGACGGCCAT CTGATGAAGC TATTTATGAG GGAACTGGC AAGCTGGAGA	60
GTCAGAGTAT CTAGTCTTTC ACCGATTGCT GTGCAGCAG ATGTGCAGGG AAAAGGAGTT	120
GCTCAAACCT TCTTAGAGGG CTGATTGAA GGTPTTGATT ATCTTGATTT TCGCTCAGAT	180
ACGCATGCTG AAAACAAGGT TATGCAACAT ATTTTGA AAACTTGGTTT TAAACAAGTC	240
GGTAAGATGC CAGTAGATGG CGAACGCTTG GCCTATCAAG AATTAAAGAA ATAATGCAAA	300
AGAAGTATGT AAAATCCTC TACTCCTCAC CAATTGGTAT TCTATCACTT GTAGCTGATG	360
ACCATTATTT GTATGGAATT TGGGTCAGG AGCAGAAGCA TTTTGAGAGG GGAAGTAGG	420
ATGAAACGAT AGAAGAAGTT GTTAGTCATC CTATTTTGA CCCAGTTATT GCTTGCTTAG	480

1029

ATGATTACTT TAAAGGCAAG CCTCAGGATT TATCCAACTT GCTCTTGGCG CCAATCGGAA	540
CGAATTTTGA AAAGAGAGTT TGGGACTATT TACAGGGCAT TCCTTATGGT CAGACAGTGA	600
CCTATGGACA AATTGCTCAA GACCTGCAAG TGGCTTCTGC TCAAGCAATT GGTGGAGCAG	660
TGGGACGCAA TCCTTGGTCT ATCCTAGTAC CTTGTTCATCG TGTGTTGGGA GCAGGCAAGC	720
GTCTGACAGG TTATGCTGCA GGAGTGGAAG AGAAAGCTTG GCTCTGGAG CATGAAGGAG	780
TAGATTTTAA AGATAGAAGC AATAGAAGGA GAAGCACATG TTAGAATTTA TCGAATACCC	840
CAAATGTTCA ACTTGTAATA AAGCAAAACA AGAATTAAAT CAATTAGGTG TGGACTATAA	900
AGCCGTCCAT ATCGTGGAAG AAACACCTAG CCAAGAAGTC ATTTTGAATT GGCTAGAAAC	960
CTCAGGATTT GAATTGAAGC AATTTTTCOA CACCAGTGGT ATCAAATACC GTGAATTAGG	1020
GCTAAAAGAT AAGGTAGGAA GTTTGTCAAA CCAAGAAGCG GCTGAGTTGC TAGCAAGTGA	1080
CGGTATGTTG TTAACACGGC CCATTTTAGT AGAAATGGA ACTGTTAAGC AAATCGGTGA	1140
TCGAAAATCT TATGAGGAAC TGGGACTGAA ATAGTTTTTA TCTATCTCTT TGATAGATAA	1200
AATATATAAC TTCCCTGTTT CAAAGTATGA TAAACTAGTA GGTAGACAAA GTCTGTATCT	1260
GACCGTAGCA AATAATTTCA TTGACGGCAG AAGCATGGTA GCATGAATCA TTATCAGAAG	1320
AGGATGTTTT TATGAATGTT ACAACGATTT TAGCATCAGA TTGGTACCAA AACTTGATGC	1380
AATTGATFCC GGATGGCAAG CTGTTTAGCC TACGTTCCGT CTTTGATGGA ATCCCTAGAA	1440
TTGTCCAACA ACTTCCAACA ACAATTATGT TGACAATTGG TGGTGCCTTT TTTGGCTTGG	1500
TTTTGGCGCT TCTTTTGGCC ATTGTGAAGA TCAATCGTGT CAAGATTTTA TATCCCTTGC	1560
AGGCCTTCTT TGTTAGTTTC TTAAAAGGGA CACCGATTTT GGTGCAACTC ATGTTGACCT	1620
ACTACGGAAT CCCTTTGGCT TTGAAAGCCC TCAATCAGCA ATGGGGAACT GGTCTCAATA	1680
TCAATGCGAT TCCAGCTGCA GCTTTTGCAG TTGTCGCCTT TGCCTTTAAT GAGGCAGCTT	1740
ATGCTAGTGA AACCATTTCG GCAGCCATTC TCTCAGTTAA TCCTGGTGAG ATTGAGGCGG	1800
CACGCAGTCT GGGTATGACC CGAGCGCAAG TTTATCGACG AGTGATTATT CCTAATGCAG	1860
CGGTGGTAGC TACTCCAACC TTGATTAAAT CCCTCATCGG TTTGACCAAG GGAACATCTC	1920
TAGCTTTTAG TGCGGTGTT GTGGAAGTCT TTGCCCCAAG TCAGATTCTA GGTGGAGCTG	1980
ATTATCGCTA TTTTGAACGC TTCATCTCCG TTGCCCTTGT TTATTGGGTA GTCAATATCG	2040
GAATTGAAAG CCTCGGTCGT TTCATCGAGA GAAAAATGGC TATTTCTGCA CCTGATACAG	2100
TGCAACAGAT GTGAAAGGAG ACCTTCGTTA ATGATTAAGA TTTCGAATTT AAGCAA	2156

(2) INFORMATION FOR SEQ ID NO: 158:

1030

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 3140 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: double
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

GTATCTCTAC ACATGTCTTC AATCGATTTT GTTGTCCTCC AATTTAATTC CTTATATGCT	60
TTGTCTGCAT TTGCATAACA AGTTGCAACG TCTCCTGAAC GTCTTGGAAC TATTTTATAA	120
GGAATAGGGA TCTTATTAAC ACTTTCAAAT GTATTTACAA GTTGTAATAC ACTAGTGCCT	180
TCTCCCGAGC CTAGGTTATA GATATAAACA TCTGTTTTTT CAGATACTTT TTCTAAAGCT	240
TTTATATGTC CTATTGCTAA ATCTACTACA TGGATATAAT CACGCACACC AGTACCATCA	300
AGCGTATCAT AATCATTTCG GAACACACTT AGCTCTGATA GCTTACCTAC CGTACTTGT	360
GCAATATAAG GCATCAAGTT GTTAGGAATT CCTGAGGGAT CTTCCCAAT CAAACCAGAC	420
TCATGAGCAC CAATTGGATT GAAATAACGA AGCAACGCAA TACTCCATTC TGAATCTGCC	480
ACATGAACAT CTTTAAAT TTGCTCAAGC ATCACTTTCG TATACCCATA AGGATTGTGTC	540
GCACCTGTTT GCATCGTCTC AATTAGAGGT GACTGATTGT TAATTCATA TACAGTCGCA	600
CTTGAAGAAA AGACAATCTT TTTAACATTA AATTCTGACA TCACCTCAAC AAGTGCCAAT	660
GTACTCATAA TATTATTTTT GTAGTACATC ACAGGCTTTT GCACGGATTC TCCGACAGCT	720
TTATAACCTG CAAAATGAAT TGCAGCATCA ATCGATTCTT GTTCAAATAC CTTTCTCAAT	780
GCTTGTTTAT CACAAACATC TAATTCGTAA AACACGGGAC GTATTCTGT AATTGCTTCA	840
ATACGGTCTA GCACCAAGAT GCTAGAGTTC GAAAGGTTGT CGACAATGAT AACTTCTTTT	900
CCTAAATTTA GTAATTCTAC TACGGTATGG CTACCAATAT AACCAGCTCC GCCTGTTACC	960
AATATTGCCA TCTGGGTTTC CTCCTAATTA ATTCCAACCG ACTTAACAAA TCTCATAAAC	1020
GCTTCATGCC CAGACGGTGT ATTCTTATAA ACTCCTGCAT CTTCCAGAAC TCTCGCAAC	1080
ACTTGTCTG CTTCTGTGTG AACTACGCTA TTAACCTCTT CTTTATTAAT GCGAGGATAT	1140
TTTCTTTTCA ATTGGTCGGC CCATTCTAAA TGATAATCCG CAATTGCATT ATCCTCTCCT	1200
AAAAGATATT TTCCAACCTC TTCTAACTCT GGTTCCAAAC GAGGTGGTAA TATCGCAAGT	1260
CCCATCACTT CGATTAACCC GATATTTTCC TTTTAAATAT GTTGATACATC TTGATGAGGA	1320
TGGAAACAC CATCTGGGTA TTGTTCACTA GTATGATTAT CTCTTAGAAC AATATCTAAT	1380
TCGTATCTCC CGTCCACTTT ACGAGCAATA GGAGTCACCG TATGGTGTGG GACATCTTCA	1440
GTCATAGCAA TGATGTCTAC TTCTAAATCT GAATATTCTC TCCACTTATT TAGAATTTTA	1500

1031

GTAGCTAAAT CTAACAAGCG ATTTTATTTT TCACTTTGTA ACCTAATTAC TGACATTGGC	1560
CATTTTACAA TACCAGCATT AACATCCTCA AAGTCTTTAA AACAAAATTC ACTCTCAAAT	1620
TTTGCTTTTT CCATTGGGAA AATATGTTTC CCTCCCTGGT AGTGGTTATG ACTAAGAATG	1680
GAGCCTCCTG AGATAGGAAG ATCAGAATTT GAACCAGCAA AATATCCTGG CAAAATATCA	1740
ACAATCTCCA ATAATTGTTT AAATGTTTTA GAGGTAATAG CCATTGGTAC ATGTTGACTA	1800
TTCAAAAATA TCGCATGCTC ATTAAAGTAT GAGTAGGGAG AATACTGGAA TCCCCATACT	1860
TCGTCAACAA GTTTCAACCG AATAATTCTA TGATTCGAAC GTGCTGGATA ATTTATTGCG	1920
CCCTGATATC CTTCATTTTC CATACATAGT AAACATTTGG GATAATTAGT TGCTTTTACT	1980
AATTTTTCAG CAGCAATTGT TTTTGGATCT TTTTCGGGTT TTGACAAAT TATCGTAATC	2040
TCTAGCTCTC CGTATTTAGT TGATGCTCGA AACTCAATAT TCTTAGCAAT AGCAGAAGTT	2100
TTAATATAAT CACTATCTTT ACTTAACTTA TAAACTCTT CAACTGCTTC TTGAGGTGAT	2160
ATATCATATG AACTCCAAA AATATCATTT AATCGACTAG GTAAAGGAAC TATGAAATTC	2220
ATTAACCTG CTCCTAAACA TTCCTTTTCC TCGATTAAAT CTTTAATTTT ACCGTTTTTT	2280
AAGGCGATTT CCACTAAGTA ATCTTTTATT TGTTTCAGGT CATTTTCATC GGAAATGCGA	2340
TCAATTCCTT CCTCACCTAT TAACGCTAGT ACTCTATTTT TCACATATAT TTTGTCAATT	2400
TCATTATACA TTCCGTATTC AATTACTCTA TCAACAAAAT TATCAATAAT TGTTTTCATA	2460
TATTTTCTT TCTAATTTAT GTTCCCATAT TTTCTATACA TTATCCATTT ATAAATGCT	2520
TGCGTAGTAT GAGCAATTTT ATCAAGGTGA TGAATAATAT CTAAAGCACT AATTACTTCA	2580
GAAACGTTCC CATCATCTTC AAATATGTAA TTCATTATTT TCTTTTCCAT ATTTATACTA	2640
AGCTCTTCTA TCTCATCTG TTTTGTGATA ACAACCATAT CTAAACATCC AGATTGTTCC	2700
TCTCTATAAC AAGATATAGC CCTATTCATA TGCAGTCCGA TAACTTCATG AAGTATTTTT	2760
ATTTTGGAAA TAATTTCTT CAAAATTTCA TTATTTTGAA GAATCTGTAG ATTTTAAAA	2820
ATTTCAACAA TTCTATCCCC AATACGTTCA ATGTCAGTTG ATATTTTAT TACACTAATA	2880
ATTCCTCTTA AGTCATATGA AACAGGATGT TGTAACAAA TTAACCTATA TCCTTTTTTA	2940
TCAATATTTA GAACTGACTC ATTTATGATT AAATCTTCTT TAATCAATTC TACTCGTTCT	3000
TCATTTGATA AATATTCAAA TAACTTCTCA TATTTATCAA GCACAGATAC CCAAATGGTC	3060
TCTAAATTAT TTGATAATTC TATAATTTCA TTTTCTAAAT ATAACCTTAA CATTTAGGTA	3120
CCTCTTCTTA ACAAAGTTTCG	3140

(2) INFORMATION FOR SEQ ID NO: 159:

1032

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 9048 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

CCGGATGATT TCCTGGTCAG ATAGGGGGAA AGTGACTTCC TCAGCAATCG CGCGTAGAGT	60
AGGATTCCCT TCACGGATAA TATCGTTCAT ATCAATTAAG TGAGCAGCTT TTGTAATACG	120
TTCTATTGCA GACATTTTCT CTCCTTATAT TATGTTTAGT GCAGTTAGCT ACTGCCAAAG	180
CCCAAGTGGT ATACTTGGA TAAGCCACTG TGGATTAGTT CATTTTCTTT CATTACCTCT	240
ACATGATATC ACAAATGAC AAGAATTGAA AGCATTATGG CATTTAGGAT TTATAGAAAA	300
TAGATAGGAA GTTCAATTCA ATTGTGAAAG AAATACTTAT CTGTGATATA ATAAAAAGAA	360
AAGGCTTGCA TAAGAAAGTA GGGAGAACGA AGATACAAAG AAGACAAAAT CGAAATCAGG	420
GTGGTTTAGC TTTTCGTTTT ATGAAGGGCT TGGTAACTT TTTAGGAGTT ATCGCAAGTG	480
GAGCAATAAG GGATTGTGG CGATACTCTT GCTAGCAGTT GGTTTATCAA TGGGCTTGGT	540
CTTGTTGTTT GAAAGCTTCC AAGGAATCCC TTGACTAGTC AAAACGAGA TACTATTTCT	600
CAAGAGGGGA CTAAGCAAAA GTCTCAGGAG TAGGAAGAGG AAAAACTGC CAGAATTATG	660
GGCCACGGGG ATTTGCTCTA CCACGATGGA CTTTCTTTT CAGCTAAAAA AGAAGACGGT	720
ACCTATGACT TTCATGAAAA TTTTGAGTAT GTGACTCCTT GGCTCAAGCA AGGGGACTAA	780
GCAGCAGATT TAGCTATTGG TGATTTTGAA GGAACCATTA ATAAGGATCA TTATTTAGCG	840
GGTTATCTTC TCTTTAATGC TCCTGTGAA GTTATGGATG CTATTAAGGA GGCAGGTTAT	900
CATGTGCTGG ATTTAGCTCA TAATCATATT TTGGATTCGC AAATTGAGGG AGTTATTTCA	960
ACGGCCGATA TTATTGAGAA AGCTGGAATC ACTCCAATCG GAGTTTATAC GCACGAACCA	1020
CGTGATCAGG CTCGCTGGT CATTAAAGGAA GTGAATGGTA TCAAGGTTCG ATTGTTAGCC	1080
TATTCCTATG GTTCAATGG AATTGAGCAG TATATTTCTC AGGAAGACTA TAATCGTTAT	1140
CTTTCAGATT TAAACGAAGA TAAGATGAAG GTTGAAATTG AACGGGCAGA GAAGGAAGCA	1200
GATATCACCA TTATCATGCT TCAGATGGGT GTTGAGTATC GATTGGAACC AACTGAAGAA	1260
CAAAAAGCTC TTTATCACAA GATGATCGAT TTGGGAGCGG ATATTATCTT TGGAGGGCAT	1320
CCTCACGTTG TTGAACCATC TGAAACGGTT GAAAAAGATG GAGATAAGAA ACTCATTATC	1380
TATTAAATGG GGAACCTCAT TTCCAATCAA CGAATTGAAT CTATGGGAGA TGAAGAGAAT	1440
GCTAAGTGGA CTGAACGTGG TGTTCATG GATGTCACCA TCAAGAAGAA GGATGGAAAA	1500

1033

ACAACTATCG GAACAGCTAA AGCTCATCCT ACTTGGGTCA ATCGAACACC AAAGGGAACC	1560
TTTTCACCAG AAGGATATCC CTTGTATCAT TACCAAACTT ATATTTTGA AGATTTTATA	1620
GAGGATGGCA GTCATCGTGA CCAGTTAGAT GAAGCGACTA AGGAACGAAT TGATACAGCC	1680
TATAAAGAAA TGAATGAACA TGTGGGATTG AAGTGGTATT AGCTTGAATC CAGAGGAAAG	1740
TAAATGATGA TTAAGGTAAT TGCGACAGAT ATGGATGGGA CCTTGCTGGA TGCTAGAGGT	1800
CAGCTTGATC TCCCACGATT GGAAAAGATT TTAGATCAGT TGGATCAAAG GGGCATTTCGT	1860
TTTGTCAATTG CGACGGGCAA TGAAATTCAC CGCATGAGAC AACTACTGAG TCCCTTGGTG	1920
GATCGAGTGG TTCTGGTTGT TGCTAATGGC GCTCGTATTT TTGAAAACAA TGAATTGATT	1980
CAGGCTCAGA CATGGGATGA CGCCATTGTC AACAAGGCTT TGACTCATTT CAAGGGTCGA	2040
GCGTGTCAAG ACCAGTTTGT TGTAACGGGG ATGAAGGGTG ATTTTGTCAA GGAAGGTACG	2100
ATTTTACAG ATCTTGAAAG TTTTATGACT CCAGAAATGA TTGAAAAATT CTACCAACGG	2160
ATGCAATTG TGGATGAATT AACATCTGAC CTCTTTGGTG GTGTGCTCAA GATGAGCATG	2220
GTGTGTGGTG AGGAACGTTT GAGTTCGGTT TTGGAAGAAA TCAATGCTCT CTTTGATGGC	2280
CGTGTCCGAG CTGTATCCAG TGGCTATGGT TGCATGATA TCCTCCAAGC TGGGATTGAT	2340
AAAGCATGGG GCTTGGAGGA ATTACTCAAG CGCTGGGACT TGAAATCCCA AGAAATCATG	2400
GCTTTTGGTG ATAGTGAAAA TGATGTTGAA ATGCTTGAAA TGGCTGGAAT TGCCTATGCG	2460
ATGGAAAATG CTGATGAGAA AGCCAAAGCT GTGGCGACTG CTCTAGCACC AGCCAAACAGC	2520
CAAGGAGGAG TTTATCAAGT CTTGGAAGAC TGGTTAGAAA AAGGAGAATG AAGTGGCAGT	2580
ACAGTTATTA GAAAATTGGC TCCTAAAGGA ACAAGAAAAA ATTCAAATA AGTATCGTCA	2640
CCTAAATCAC ATTTCTGTTG TAGAACCAAA CATTCTTTTT ATTGGGGATT CCATTGTGCA	2700
GTATTATCCT CTACAGGAGC TATTTGGGAC TTCAAAGACG ATGTGCAATC GAGGAATTCTG	2760
TGGCTATCAG ACAGGACTGT TACTAGAGAA CCTTGATGCT CATCTATATG GTGGAGCAGT	2820
AGATAAAATT TTTCTTCTGA TTGGGACAAA TGATATCGGA AAGGATGTTT CTGTGAATGA	2880
GGCTCTCAAT AATCTCGAAG CTATCATCA ATCCGTTGCT CGCGATTATC CATTGACAGA	2940
GATTAAATTG CTTTCCATTT TGCTGTCAA TGAGAGAGAG GAGTACCAGC AGGCAGTCTA	3000
TATCCGCTCG AATGAAAAA TTCAGAACTG GAATCAAGCC TATCAAGAGC TTGCATCTGC	3060
CTATATGCAG GTGGAATTTG TGCCAGTATT TGATTGTTTG ACAGACCAAG CAGGCCAACT	3120
CAAAAAGAA TATACAACATG ATGGACTGCA CCTCAGTATT GCTGGTTATC AGGCTTTGTC	3180
AAAATCCTTG AAAGACTATC TTTACTAAAT AGCTAAATAA TGTAAATTT GAGCATAATA	3240

1034

TCTTGTAATAA AATTCTAAAA TCCTTTAAAA TAAAAAGTGA CGGAGGAATT TATGAATGTA	3300
AATCAGATTG TACGGATTAT TCCTACTTTA AAAGCTAATA ATAGAAAATT AAATGAAACA	3360
TTTATATTG AAACCCTTGG AATGAAGGCC TTGTTAGAAG AATCGGCCTT TCTGTCACTA	3420
GGTGACCAAA CGGGTCTTGA AAAGCTGGTT TTAGAAGAAG CTCCCAGTAT GCGTACTCGT	3480
AAGGTAGAGG GAAGAAAAAA ACTAGCTAGA TTGATTGTCA AGGTGGAAAA TCCCTTAGAA	3540
ATTGAAGGAA TCTTATCTAA AACAGATTCG ATTCATCGAT TATATAAAGG TCAAATGGC	3600
TACGCTTTTG AAATTTCTC ACCAGAAGAT GATTGTGATT TGATTTCATGC GGAAGATGAC	3660
ATAGCAAGTC TAGTAGAAGT AGGAGAAAAG CCTGAATTTC AAACAGATTT GGCATCAATT	3720
TCTTTAAGTA AATTGTGAGT TTCTATGGAA TTACATCTCC CAACTGATAT CGAAAGTTTC	3780
TTGGAATCAT CTGAAATTGG GGCATCCCTT GATTTTATTC CAGCTCAGGG GCAGGATTTG	3840
ACTGTGGACA ATACGGTTAC CTGGGACTTA TCTATGCTCA AGTTCCTGGT CAATGAATTA	3900
GACATAGCAA GTCTTCGCCA GAAGTTTGAG TCTACTGAAT ATTTTATTCC TAAGTCTGAA	3960
AAATCTCTCC TTGGTAAAGA TAGAAATAAT GTTGAATTGT GGTGTGAAGA AGTATGAAGT	4020
GGACCAAGAT TATTAATAAA ATAGAAGAAC AAATCGAGGC AGGGATTAT CCCGGAGCCT	4080
CTTTTGCGTA TTTAAGGAC AATCAATGGA CAGAGTTCTA TTTAGGCCAG AGTGACCCAG	4140
AGCATGGCTT GCAGACTGAG GCAGGACTAG TTTATGACCT AGCTAGTGTC AGCAAGGTTG	4200
TTGGGGTTGG CACAGTTTGT ACCTTCTTGT GGGAAATAGG TCAATTAGAT ATTGATAGAC	4260
TGGTAATAGA TTTTACCT GAGAGTGATT ATCCAGACAT CACTATTCGC CAGCTCTTGA	4320
CTCATGCAAC AGACCTTGAT CCTTTTATTC CTAATCGTGA TCTTTAACA GCCCCTGAAT	4380
TAAAGGAAGC GATGTTTCAT CTCAACAGAC GAAGTCAGCC AGCCTTCTT TATTCGGATG	4440
TCCATTTTTT GCTGTGGGC TTTATTTTGG AAAGAATTTT TAATCAAGAT TTGGATGTGA	4500
TTTTAAAGGA TCAAGTCTGG AAACCTTGGG GAATGACGGA AACTAAGTTT GGGCCAGTTG	4560
AGCTTGCTGT TCCAACAGTT AGAGGTGTAG AGGCAGGCAT AGTGCATGAT CCCAAGGCTC	4620
GTCTCCTGGG TAGACATGCT GGGAGTGCTG GTTTATTTTC GACTATAAAG GATTTACAAA	4680
TCTTTTATGA AACTATTTA GCAGATGATT TTGCAAGAGA CTTAAATCAA AATTTTCTC	4740
CTTTGGATGA CAAGGAACGT TCTTTAGCAT GGAATTTGGA AGGAGATTGG CTAGACCATA	4800
CGGGCTATAC AGGTACCTTT ATCATGTGGA ATCGTCAGAA GCAAGAAGCC ACTATTTTCC	4860
TATCGAATCG TACCTATGAA AAGGACGAGA GAGCTCAATG GATATTAGAC CGCAATCAAG	4920
TGATGAACTT GATTCGCAAA GAAGAGTAAG GAGAGACATG TCAAATAGTT TAAAGGGAC	4980
TTTACTAACA GTTGTGGCTG GTATTGCTTG GGGGTTGTCA GGAACGAGTG GCCAATACCT	5040

1035

AATGGCACAC GGAATTTTCGG CTCTGGTCTT GACTAACTTG CGTCTTTTAA TCGCTGGTGG	5100
AATTCTCATG CTCTTGGCTT ATGCTACTGC AAAGGATAAA ATACTGGTCT TTTTAAAGGA	5160
TAGAAAGAGT TTGCTGTCTC TTCTTATTTT TGCTCTGATT GGTCTTTTTC TCAACCAATT	5220
CGCCTATCTG TCTGCTATTC AGGAGACCAA TCGGGGAACA GCGACGGTGC TTCAGTATGT	5280
TTGTCCTGTC GGAATTTTAA TTTATAGCTG TATCAAGGAT AGGGTGGCAC CGACACTGGG	5340
AGAGATAGTT TCCATCATAT TCGCCATCGG AGGAACCTTC CTGATCGCAA CACATGGGCA	5400
GTTGGACCAG TTATCCATGA CACCTGCTGG TCTGTTCTGG GGTCTCTTTT CTGCCTTGAC	5460
TTATGCTCTG TATATCATTT TACCCATAGC CTTGATTAAA AAGTGGGGGA GCAGCTTGGT	5520
CATTGGTGTG GGAATGGTCA TAGCAGGTTT GGTGCGCCCTT CCTTTTACAG GGGTTCTACA	5580
GGCCGATATC CCGACTAGTC TTGATTTTCT CCTTGCCTTT GCAGGCATTA TCCTTATCGG	5640
GACTGTCTTT GCCTATACAG CTTTCCTTAA AGGAGCCAGT CTGATAGGAC CGGTCAAGTC	5700
AAGCTTGTG GCTTCAATTG AGCCAATATC GCGGATTTTC TTTGCCCTCT TAATAATGAA	5760
TGAACAATTT TATCCCATG ATTTTCTTGG TATGGCAATG ATATGTGTTG CTGTAACCTT	5820
GATTTCTTTG AAAGATTTAT TCTTAGAAAA ATAAAAAGA CTCTTTGTCC GTGACAGAGA	5880
GTTTTTGCGT GGTAATCTAA TTATTTTCAA GATAAAATTC AAAGCGTTCG CCTACATATT	5940
GACTTTTAC GTATTCAAAA GCAGTACCAT CTTCTAGGTA GGAAACCTGG GTCAATCCAA	6000
GAATAGCATG TCCTTTTCA ACTTCCAAAT AGTGGGCAAT CTTTCTTTTA GCAAGGCGAG	6060
CATAGATGGT CTGTTGAGAT TTGCCGATAC GATAGCCATG TTTTGCAGG GTTTGGAAGA	6120
AATGACTGGT GATTTCTTCT TTTTAAAGT CCTTAATGAA TTTTTCAGGA ATAGAAGCAA	6180
CTTCATAAAC TAGGGGAAC TGGTCGGCAT AGCGGACCCG CTCCATTCGG ATAATATTGT	6240
CCGTTGGAAA AATTCCTAGC TTGGCAACTT CTTGCTCATT GGGAATGGTT TTTTGTAGG	6300
AAATGAGCTG GCTAGAGGGA ACTTTACCTT GGGATTTGAC AATTTTCAGTA AAAGTGGTTG	6360
TCCCTCGCAT CTTTCTTGT ACTCGAGTAC TGGAACAAA GGTGCCGCTT CCTACACGGC	6420
GCTCTAAGAC GCCTTCTTCG ACTAATAGAG ATACGGCTTG GCGGAGGGTC ATGCGACTGA	6480
CCGCAAACTG CTCAGCTAAA TCTCTTTCAC TGGGAAGCCT CTCACCAATA GCCCAACGGT	6540
ACTCGTCAAT ATCCTTTTTT ATCTGATCAT GGATTTTTAT ATAAGCAGGT AGCATATTTT	6600
TCACTTCATT TCTATCTTTT CTCTATTGTA CCCCAATAAA CTAGAAAAAG TCAAACTTCG	6660
CCTTGTTTAG TTGGTAATTC GCCCTTATTT GTGATAGAAT ATTGAGAAAA GATATTTCTT	6720
TTGAGAAAGG AAAAAGATGA GCAACATTC AACTGATTTG CAAGATGTAG AAAAAATCAT	6780

1036

CGTATTGGAC TATGGTAGCC AGTACAACCA GCTGATTTCA CGCCGTATCC GTGAGATTGG	6840
TGTTTTTTTCA GAACTAAAAA GCCATAAAAT TTCAGCTGCT GAAGTTCGTG AAGTCAATCC	6900
TGTAGGAATT ATTCTATCAG GTGGTCCAAA TTCTGTATAT GAAGATGGTT CATTTGATAT	6960
TGACCCAGAA ATCTTCGAAC TCGGAATTCC AATTTTGGGA ATCTGTTATG GTATGCAGTT	7020
ATTGACCCAT AAAC TTGGAG GAAAAGTTGT TCCTGCAGGT GATGCTGGAA ATCGTGAATA	7080
CGGTCAATCA ACCCTAACTC ACACACCATC AGCGCTTTT GAATCAACAC CTGATGAACA	7140
GACTGTTTTG ATGAGCCATG GTGATGCGGT TACTGAGATT CCTGCTGACT TTGTTCGTAC	7200
AGGTACATCA GCTGACTGCC CATACGCAGC CATCGAAAAC CCAGATAAAC ACATTTACGG	7260
TATCCAATTC CACCCAGAAG TTCGTCATTC TGTATACGGA AATGATATCC TTCGTAACCT	7320
TGCCCTTAAC ATTTGTAAGG CTAAAGGTGA CTGGTCAATG GATAATTTCA TTGACATGCA	7380
GATCAAAAAA ATTCGTGAAA CCGTCGGTGA TAAACGTGTC CTTCTTGGTC TATCAGGTGG	7440
TGTTGACTCA TCTGTCGTTG GGGTTCTTCT CCAAAAAGCG ATTGGCGATC AATTGATCTG	7500
TATCTTCGTA GACCACGGTC TTCTTCGTAA AGGCGAAGCT GATCAAGTTA TGGACATGCT	7560
CGGTGTAAG TTTGGTTTGA ATATCGTCAA AGCAGACGCT GCTAAACGTT TCCTTGACAA	7620
ACTTGCTGGC GTTCTTGACC CTGAACAAAA ACGTAAATC ATCGGTAACG AGTTTGTCTA	7680
TGTATTCGAT GACGAAGCAA GCAAGCTCAA AGATGTGAAA TTCCTTGCTC AAGTACTTT	7740
ATATACAGAT GTTATCGAGT CTGGTACGGA TACAGCTCAA ACTATCAAGT CACACCACAA	7800
CGTGGGGGTC TTCCAGAAGA TATGCAGTTT GAATTGATTG AACCACCTCAA TACTCTTTAC	7860
AAGGATGAAG TTCGTGCTCT TGGTACAGAG CTTGGTATGC CAGACCATAT CGTATGGCGC	7920
CAACCATTCC CAGGACCAGG ACTTGCTATC CGTGTATGG GTGAAATCAC TGAAGAGAAA	7980
CTTGAAACCG TTCGTGAATC AGACGCTATT CTTGCTGAAG AAATCGCTAA AGCTGGACTT	8040
GACCGCGATA TTTGGCAATA CTTCACTGTT AACACAGGCG TTCGTTCACT CGGTGTTATG	8100
GGTGACGGTC GTACGTATGA CTACACGATT GCAATCCGTG CTATCACTTC TATCGATGGT	8160
ATGACTGCTG ATTTTGCCAA AATTCCATGG GAAGTACTTC AAAAAATCTC AGTACGTATC	8220
GTAAATGAAG TGGATCATGT TAACCGTATC GTCTACGATA TTACAAGTAA ACCACCTGCA	8280
ACAGTTGAGT GGAATAATC GCAAAAAAAT TAAAAGCTTT GTAAATCAA CGGTTACAGA	8340
GGATTAAAAA CTGTAACCTGG GATTAAAACG GGAACATTTG CTAAAAAGAA TAAATTGAAT	8400
AATAGTTCCA AGTGGTTTAC ATTTGGACAA AAAATTAGAC CGTAGTTTTC AAGCTGCGGT	8460
CTTTTGATAT ATATAATGAG AATTAATGGC TCTTTGTCAA CTGTAGTGGG TTGAAGTCAG	8520
CTAAGCTCGA GAAAGGACAA ATTTTGTCTT TTCTTTTTTG ATATTCAGAG CGATAAAAAAT	8580

1037

CCGTTTTTTG AAGTTTTCAA AGTTCCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT	8640
GAGATTATTG GTCGCTTCCA ATTTGGCGTT AGAATAGTGT AGTTGAAGGG CGTTGACGAT	8700
TTTCTCTTTG TCCTTTAGAA AGGTTTTAAA GACAGTCTGA AAAAGAGGAT GAACCTGCTT	8760
TAGATTGTCC TCAATGAGTC CGAAAAATTT CTCCGTTCC TTATTCTGAA AGTGAAACAG	8820
CAAGAGTTGA TAGAGCTGAT AGTGATGTTT CAAGTCTTGT GAATAGCTCA AAAGCTTGTT	8880
TAAAATCTCT TTATTGGTTA AATGCATACG AAAAGTAGGG CGATAAAAAT GTTTATCGCT	8940
GAGTTTACGA CTATCCTGTT GTATGAGCTT CCAGTAGCGC TTGATAGCCT TGTATTCATG	9000
AGACTTTCGA TCCAATTGAT TCATGATTG AACACGCACA CGACTCGG	9048

(2) INFORMATION FOR SEQ ID NO: 160:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 10399 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

GTACCTTTAT TGATGAATGG ACTGTTTAAA TCAGTAGCAC GCCAACCAGA TATGCTTTCT	60
GAGTTTCGTA GTTTGATGTT TTTAGGTGTT GCCTTTATTG AAGGAACTTT CTTTGTAAC	120
CTTGCTCTTCT CATTATTAT CAAATAAATA CATGGAACGA GAAGAAAAGG GAGGATTTTA	180
GATGGAAGAA AGTATTAATC CAATCATCTC TATTGGTCCT GTTATCTTCA ATCTGACTAT	240
GTTAGCCATG ACTTTGTTGA TTGTGGGAGT TATTTTGTG TTTATTTATT GGGCAAGCCG	300
CAATATGACC TTGAAACCCA AAGGAAAGCA AAATGTACTT GAGTATGTCT ATGACTTTGT	360
TATTGGATTT ACAGAACCTA ACATTGGTTC GCGCTACATG AAAGATTACT CACTCTTTT	420
CCTTTGTTTA TTCCTTTTCA TGGTGATTGC CAATAACCTT GGCTTAATGA CAAAGCTTCA	480
AACGATCGAT GGGACTAACT GGTGGAGTTC GCCAACCGCT AATTTACAGT ATGACTTAAC	540
CTTATCTTTT CTTGTCATTT TGTGACACA TATAGAAAGC GTTCGTCGTC GTGGATTTAA	600
AAAAAGTATA AAATCTTTTA TGAGTCCTGT TTTTGTGATA CCGATGAATA TCTTGGAAGA	660
ATTTACAAAC TTCTTATCTT TGGCTTTGCG GATTTTGGG AATATCTTTG CAGGAGAGGT	720
CATGACGAGT TTGTTACTTC TTCTTTCCCA CCAAGCTATT TATTGGTATC CAGTAGCCTT	780
TGGAGCTAAT TTGGCTTGGA CTGCATTTTC TGTCTTTATT TCCTGCATCC AAGCTTATGT	840
TTTACTCTT TTGACATCTG TGTATTTAGG GAATAAGATT AATATTGAAG AGGAATAGAA	900

1038

AGGAGTAACT GATGCACGTA ACAGTAGGTG AATTAATTGG TAATTTTATT TTAATCACTG	960
GCTCTTTTAT TCTTTTGCTA GTCTTGATTA AAAAATTTGC ATGGTCTAAT ATTACAGGCA	1020
TTTTCGAAGA AAGAGCTGAA AAAATTGCTT CAGATATTGA CAGAGCTGAA GAAGCCCGTC	1080
AAAAAGCAGA AGTATTGGCT CAAAAACGCG AAGATGAATT GGCTGGTAGC CGTAAAGAAG	1140
CTAAGACAAT CATTGAAAAT GCAAAGGAAA CAGCTGAGCA AAGTAAGGCT AATATCTTAG	1200
CAGATGCTAA ACTAGAAGCA GGACACTTAA AAGAAAAAGC CAATCAAGAA ATTGCTCAAA	1260
ATAAAGTAGA AGCTTTACAG AGTGTTAAGG GTGAGGTCGC AGATTTGACC ATCAGCTTAG	1320
CTGGTAAAT CATCTCACA AACCTTGACA GTCATGCCCA TAAAGCACTC ATTGATCAGT	1380
ATATCGATCA GCTAGGAGAA GCTTAATGGA CAAGAAAACA GTAAAGGTAA TTGAAAATA	1440
CAGCATGCCT TTTGTCCAAT TGGTACTTGA AAAAGGAGAA GAAGACCGTA TCTTTTCAGA	1500
CTTGACTCAA ATCAAGCAAG TTGTTGAAA AACAGGCTCG CCTTCTTTT TAAAAACAAGT	1560
GGCAGTAGAC GAGTCGGATA AGGAAAAAAC AATTGCTTTT TTCCAAGATT CTGTGTCGCC	1620
TTTATTACAA AACTTTATCC AGGTCTGGC CTACAATCAC AGAGCAAATC TTTTTTATGA	1680
TGTGCTTGTA GATTGCTTGA ACCGACTTGA AAAAGAAACA AATCGATTG AAGTGACGAT	1740
TACGTCTGCT CATCCTCTAA CTGATGAACA GAAGACTCGT TTGCTCCCTT TGATTGAGAA	1800
AAAAATGTCT CTGAAAGTAA GGAGTGTAAG AGAACAAATC GATGAAAGTC TCATTGGTGG	1860
TTTTGTCAAT TTGCCAATC ACAAGACAAT TGATGTGAGT ATTAAACAAC AACTTAAAGT	1920
TGTTAAAGAA AATTTGAAAT AGAAAGTGGT GTTCTTTTGG CAATTAACGC ACAAGAAATC	1980
AGCGCTTTAA TTAAGCAACA AATTGAAAAT TTCAAACCCA ATTTTGATGT GACTGAAACA	2040
GGTGTGTGTA CCTATATCGG GGACGGTATC GCGCGTGCTC ACGGCCTTGA AAATGTCATG	2100
AGTGAGAGT TGTGAATTT TGAAAACGGC TCTTATGGTA TGGCTCAAAA CTTGGAGTCA	2160
ACAGACGTTG GTATTATCAT CCTAGGTGAC TTTACAGATA TCCGTGAAGG CGATACAATC	2220
CGCCGTACAG GGAAAATCAT GGAAGTCCCT GTAGGTGAAA GTCTGATTGG TCGTGTGTG	2280
GATCCGCTTG GTCGTCCAGT TGACGGTCTT GGAGAAATCC AACTGATAA AACTCGTCCA	2340
GTAGAAGCAC CAGCTCCTGG TGTATGCAA CGTAAGTCTG TTTCAGAACC ATTGCAAACT	2400
GGTTTGAAAG CTATTGACGC CCTTGTACCG ATTGGTCGTG GTCAACGTGA GTTGATTATC	2460
GGTGACCGTC AGACAGGGAA AACAACCATT GCGATTGATA CAATCTTGAA CCAAAAAGAT	2520
CAAGATATGA TCTGTATCTA CGTCGCGATT GGACAAAAG AATCAACAGT TCGTACGCAA	2580
GTAGAAACAC TTCGTAGTA CGGTGCCTTG GACTACACAA TCGTTGTGAC AGCCTCTGCT	2640
TCACAACCAT CTCCATTGCT CTTCTAGCT CTTATGCTG GGGTTGCTAT GCGGAAGAA	2700

1039

TTTATGTATC AAGGTAAGCA TGTTTTGATT GTATACGATG ATCTATCAAA ACAAGCGGTA	2760
GCTTATCGTG AACTGTCGCT CTTGCTTCGT CGTCCTCCAG GTCGTGAAGC CTTCCCAGGG	2820
GATGTTTTCT ATCTCCACAG CCGTTTGCTT GAGCGCTCAG CTAAAGTTTC TGATGAACTT	2880
GGTGGTGGAT CAATTACAGC CCTACCATTT ATCGAGACAC AAGCAGGAGA TATCTCAGCC	2940
TATATCGCAA CCAACGTGAT TTCTATCACT GATGGACAAA TCTTCCTTGG CGATGGCCTC	3000
TTCAATGCAG GTATTCTGCC AGCCATCGAT GCGGGTTCAT CTGTATCTCG TGTAGGTGGT	3060
TCTGCACAAA TCAAAGCCAT GAAGAAGGT GCTGGTACAC TTCGTATCGA CCTTGCCTCA	3120
TACCGTGAGT TGGGAAGCCTT TACTAAGTTT GGTCTGACT TGGACGCAGC AACACAGGCT	3180
AAGTTGAACC GTGGACGTCG TACCGTTGAG GTCTTGAAAC AACCTGTTCA CAAACCATTA	3240
CCTGTTGAGA AACAAGTAAC CATTCCTTAT GCTTTGACAC ATGGTTTCTT GGATACTGTT	3300
CCAGTAGATG ATATTGTTTG TTTCGAGGAA GAGTCCATG CCTTCTTTGA TGCTCAACAT	3360
CCAGAGATT TGGAAACCAT TCGTGATACA AAAGACTTGC CAGAAGAAGC AGTCTTGAT	3420
GCTGCGATTA CAGAGTTTCT CAATCAATCT AGCTTCCAAT AAGAATAGAG GTGTCAGATG	3480
GCAGTATCTC TAAATGATAT TAAAACAAAA ATCGCCTCAA CAAAAATAC GAGTCAAATC	3540
ACTAATGCCA TGCAAATGGT ATCGGCTGCT AAGCTAGGTC GTTCTGAAGA AGCTGCTCGC	3600
AACTTCCAAG TTACGCTCA GAAAGTCCGT AAACCTTTGA CAGATATCCT TCATGGTAAT	3660
GGAGCTGGTG CTTCAACTAA TCCGATGTTG ATTAGCCGTT CTGTGAAGAA GACAGGCTAT	3720
ATCGTTATCA CTTCAGACCG CGGTTGGTT GGAGGTTATA ATTCCTCTAT TTTGAAAGCT	3780
GTTATGGAGT TGAAAGAAGA ATACCACCCA GACGGTAAAG GTTTTGAAAT GATCTGTATC	3840
GGTGGGATGG GAGCTGATTT CTTTAAGGCT CGCGGTATTC AACCACTTTA TGAATTACGT	3900
GGCTTGTCAG ACCAACCTAG CTTTGATCAA GTTCGTAAGA TTATTTCAAA AACTGTTGAA	3960
ATGTACCAAA ATGAACCTT TGATGAGCTT TATGTTTGCT ACAACCACCA TGTCATACG	4020
CTAACCAGTC AAATGCCGTG GGAACAAATG CTTCCGATTG TTGACTTGGA TCCAAATGAA	4080
GCGGATGAAG AGTACAGCTT GACTTTTGAA TTGGAAACCA GCCGAGAAGA AATTCTGGAG	4140
CAGTTGTTGC CTCAGTTTGC AGAAAGTATG ATTTACGGTG CCATTATCGA TGCCAAGACA	4200
GCTGAGAATG CTGCGGCAT GACAGCCATG CAAACAGCGA CAGATAATGC TAAGAAAGTC	4260
ATCAATGATT TGACAATTCA GTATAACCGT GCCAGACAGG CGGCGATTAC ACAAGAAATT	4320
ACAGAAATCG TAGCAGGTGC TAGTGCCTTA GAATAGGCTC TAGTCCAGCT CGTATGAAAA	4380
TGAACCTAGG ACCTAGTTGA GCTAGGAACC GACAGTATCT TATATAGAAT AGGAGAAGGA	4440

1040

GATGAGTTCA GGTAAAATTG CTCAGGTTAT CCGTCCCGTT GTAGACGTTT TGTTCGACG	4500
AGGGGAAAAA CTCCTGAGA TTAACAATGC ACTTGTCTGC TACAAAAATG ACGAAAGAAA	4560
AACAAAAATC GTCCTTGAAG TAGCCTTGGA GTTAGGAGAT GGTATGGTTC GTACTATCGC	4620
CATGGAATCA ACAGATGGGT TGACTCGTGG AATGGAAGTA TTGGACACAG GTCGTCCAAT	4680
CTCTGTACCA GTAGGTAAAG AAACTTTGGG ACGTGTCTTC AACGTTTGG GAGATACCAT	4740
TGACTTGGA GCTCCTTTTA CAGAAGACGC AGAGCGTCAG CCAATTCATA AAAAAGCTCC	4800
AACTTTGTAT GAGTTGTCTA CCTCTTCTGA AATCCTTGAA ACAGGGATCA AGGTTATTGA	4860
CCTTCTTGCC CTTACCTTA AAGGTGGTAA AGTTGGACTT TTCGGTGGTG CCGGAGTTGG	4920
TAAAACTGTC TTAATCCAAG AATTGATTCA CAACATTGCC CAAGAGCACG GTGGTATTTT	4980
AGTATTTGCT GGTGTTGGGG AACGTACTCG TGAGGGGAAT GACCTTTACT GGGAAATGAA	5040
AGAATCAGGC GTTATCGAGA AAACAGCCAT GGTCTTTGGT CAGATGAATG AGCCACCAGG	5100
AGCACGTATG CGTGTGCCC TTACTGGTTT GACAATCGCT GAATACTTCC GTGATGTGGA	5160
AGGCCAAGAC GTGCTTCTCT TTATCGATAA TATCTTCCGT TTCACTCAGG CTGGTTCAGA	5220
AGTATCTGCC CTTTGGGTC GTATGCCATC AGCCGTTGGT TACCAACCAA CACTTGCTAC	5280
GGAAATGGGT CAATTGCAAG AACGTATCAC ATCAACCAAG AAGGGTTCTG TAACCTCTAT	5340
CCAGGCTATC TATGTGCCAG CGGATGACTA TACTGACCCA GCGCCAGCAA CAGCCTTCGC	5400
TCACTTGAT TCAACAACAA ACTTGAACG TAAGTTGGTA CAATTGGGTA TCTACCCAGC	5460
CGTTGACCCA CTTGCTTCAA GCTCACGTGC CTTGGCACCT GAAATCGTTG GAGAAGAGCA	5520
CTATGCAGTT GCTGCTGAAG TAAAACGTGT CCTTCAACGT TACCATGAAT TGCAAGATAT	5580
CATTGCTATC CTTGGTATGG ATGAGCTTTC TGATGAAGAA AAGACCTTGG TTGCTCGCGC	5640
CCGTCGTATC CAGTTCTTCT TGTACAAAA CTTCAACGTT GCGGAACAAT TTACTGGTCA	5700
GCCAGGTTCT TATGTTCCAG TTGCTGAAAC TGTACGTGGC TTAAAGGAAA TCCTTGATGG	5760
TAAATACGAC CACTTGCCAG AAGATGCCTT CCGTGGTGTA GGTTCATATCG AAGATGTGAT	5820
TGCAAAAGCT GAAAAAATGG GATTTAAGA GGTGATCTAT GGCTCAGTTA ACTGTCCAGA	5880
TCGTGACACC AGATGGTCTC GTCTATGATC ACCATGCCAG CTATGTATCG GTTCGAACTC	5940
TGGATGGTGA GATGGGGATC TTGCCACGAC ATGAAAATAT GATTGCGGTT TTAGCAGTTG	6000
ATGAAGTAAA GGTAAAACGT ATCGATGATA AAGATCACGT GAACTGGATT GCAGTAAACG	6060
GTGGCGTTAT TGAAATGCC AATGATATGA TCACAATCGT CGCTGACTCT GCAGAACGTG	6120
CTCGTGATAT CGATATCAGT CGTGCAGAAC GTGCCAACT TCGTGCAGAA CGTGCAATTG	6180
AAGAAGCACA AGACAAACAT TTGATTGACC AAGAACGTCG TGCTAAGATT GCTTTGCAAC	6240

1041

GTGCTATTAA CCGTATTAAT GTCGGAAATA GACTATAAGA AAAAATGAAC TTGAAAATAC	6300
CAAGTTCATT TTTTATGGTG TTTTAAGGAG CAAAACGGAT GCAGACTGCT TCGGGAACAT	6360
GGAAGTCGTT GGAGAGTCT GCTAGACGAC CATTGTCACA ATTACGTTTA AAGACAGTTG	6420
CATTGTCAGA GTCTTGATGG ACAACAATGA GAAATTTTGT GTCGGGTGTC AAATCAAAAT	6480
CACGTGGAGT CTGACCATGC GTTGAACGA TTTCTAATAA CTCTAAGCTA CCGTCCGCAA	6540
GGATGGTATA TACTGCGATA GAATCATGGC CACGGTTAGA AGCGTAGAGG TATTTACCGT	6600
CTTTAGAGAG ATGAATAGCA GCGGTTCCAT TAAAGCCTTC GTAAGCTTCC GGTAAAGTTG	6660
AAATGACCTG CATACTTCA AATTCGCCAA CGCCATCGTA GATTAAAACT TCGATAGTAC	6720
TATTGAGTTC ACAAATGAGA TAAGCGATT TATAGTGGTT ATGGAAAATG ATATGGCGTG	6780
AGCCTGCTCC TGGCTTGCTG TGATAGGTAT AGAGCTTAGA TAATTTTCCT TCTTGATCGA	6840
GGTCATAGGT GATGACTTGG TCAGTCCCA AGTCGCAGGT CACTAGATAG TGGTCAGGTG	6900
TTAAATCTGT ATAGTGAACA TGGGGGAAG CTTGATTTTC ATGTGGACCT TGGCCACTGT	6960
GTTGATCCAT ATCACTAAGT AGAAGACTAC CATCTTCCTG GCGTTTATAA ACAAGGACTT	7020
GTCCCTTGTG ATAGTTAGCT GCGTAAACCA AATCAGCTT TTCATCGACA GCAACATAAC	7080
AGTGGGGAGC TCCTTCTTCA ACAACATGAT TTAACACAGT CCCGTCAGTT TGATAGGCTG	7140
CAATCCCCC CTTATCGTCT TGGCTACCA CAGTGATATA ATGTTGGTGC TGGTCAAAGG	7200
CAAGGTAGGT TGGACTTGGC TCAGCTGCAA AAAGTCTAG ATTTGAAAGC TGACCAGTTT	7260
CTGTATCAAA GTCTGCCTTG TAAATCCCTT GAGAAGTACG ACGTGATATA GTTCCAAAAT	7320
AAACAGTTTC TTTCATTACT ATACCTCTGT GTAAAGATAA GACTATTATA TCACAAAAC	7380
AAGTAAATTA AAGATATCCA ATTAGATGTA AGCACTTTAA AAAAGAGTTA TTTTGTTC	7440
AAAATGGTAT AATGAGAGAA CAATAGAAAG GAAGTATTTA TGGAGCAAAA AGAGAAACAT	7500
TTTAGCTAT CTTGGTTTTT CAAGTGTTTT TTAGATAACA AGGCAATTAC GGTATTTT	7560
GTAACCTTAT TATTGGGACT GAATCTTTTT ATTTAAGTA AGATTAGTTT TCTATTTT	7620
CCTGTTTTAG ACTTTTTAGC AGTTGTGATG TTGCCAGTCA TTTGTCTGG TTTGTTATAT	7680
TATTTGTTGA ATCCTATTGT TGATTGGATG GAGAAGCATA AGGTTAATCG TGTATAGCT	7740
ATCACTATTG TCTTTGTTAT CATCGCTCTC TTTATCATTT GGGGCTTGGC AGTCGCCATT	7800
CCAAATCTGC AACGTCAGGT TTGACCTTT GCAAGAAACG TTCTGTTTA CTTAGAAGAT	7860
ATAGATAGGA TTGTTAATGG ATTGGTAGCC CAGCACCTGC CAGATGATTT CAGACCTCAA	7920
TTAGAGCAAG TTTTGACCAA TTTTCTAGC CAGGCTACAG TTTTGGCAAG TAAGGTTTCA	7980

1042

TCTCAGGCAG TCAACTGGGT GAGTGCCTTT ATTAGCGGGG CTTCTCAAGT GATTGTTGCC	8040
TTGATTATCG TTCCTTTCAT GCTCTTTTAT CTCTTGCGTG ATGGGAAAGG CTTGCGTAAC	8100
TATTTGACCC AATTCATTCC AAGAAAATG AAGGAACCTG TTGGACAAGT TTTATCAGAT	8160
GTGAATCAAC AGTTGTCCAA CTATGTTCTGA GGGCAAGTGA CAGTGGCTAT TATTGTAGCA	8220
GTAATGTTTA TCATCTTCTT CAAGATTATT GGTCTACGCT ATGCGGTAC GCTGGGGGTT	8280
ACTGCTGGTA TTTTAAATCT GGTCCCTTAT CTGGGTAGCT TTCTAGCCAT GCTTCCTGCT	8340
CTAGTATTGG GTTTGATTGC TGGTCCAGTC ATGCTTTTGA AAGTAGTGAT TGTCTTTATC	8400
GTAGAACAAA CTATTGAAGG CCGTTTGTG TCTCCATTGA TTTTGGGAAG TCAATTAAAC	8460
ATCCACCCTA TTAATGTTCT CTTTGTGTTG TTAACCTCAG GATCTATGTT TGGTATCTGG	8520
GGAGTTTAC TTGGTATTCC GGTTTATGCC TCTGCTAAGG TTGTCATTTC AGCCATTTTC	8580
GAATGGTATA AGGTAGTCAG TGGTCTATAT GAATTAGAGG GTGAGGAAGT CAAGAGTGAA	8640
CAATAGTCAA CAGATGTTAC AGGCTTTGGA GGAGCAAGAT TTAACTAAGG CTGAGCATT	8700
TTTCGCCAAA GCTTTAGAAA ATGATTCAAG TGATCTTCTG TATGAATTGG CAACTTATCT	8760
TGAAGGGATT GGTTCCTATC CTCAGGCCAA GGAAATTTAC CTGAAAATG TAGAGGATT	8820
TCCAGAGGTT CATCTTAATC TAGCTGCAAT TGCTAGCGAG GATGGTCAAA TAGAAGAAGC	8880
CTTTACCTAT CTTGAGGAAA TCCAAGCTGA CAGTGACTGG TATGTCTCGT CTTTGGCTCT	8940
GAAGGCAGAC CTTTACCAGC TGGGAAGGTT GACAGATGTG GCACGTGAGA AATTATTGGA	9000
GGCCTTGACC TACTCAGAGG ATTCTCTCTT GATATTGGGT TTGGCAGAGT TGGATAGTGA	9060
GTGGAAGAAAT TACCAAGCGG CTATTCAAGC CTATGCCAG TTAGATAATC GCTCGATTTA	9120
TGAGCAAACG GGCATTTCCA CCTATCAACG AATTGGCTTT GCCTATGCTC AGTTAGGGAA	9180
ATTTGAAACG GCTACTGAGT TTTTAGAAAA AGCCCTGGAG TTAGAATACG ATGACTTAAC	9240
AGCTTTTGAG TTGGCCAGTC TTTATTTTGA TCAAGAAGAA TATCAAAAAG CCACCTCTA	9300
CTTTAAGCAG CTTGATACCA TTTCTCCTGA CTTTGAAGGC TATGAGTATG GGTACAGTCA	9360
GGCTTTACAT AAGGAACATC AAGTTCAAGA AGCCCTGCGT ATCGCTAAGC AAGGATTAGA	9420
GAAAAATCCC TTTGAAACTC GCCTCTTGCT AGCTGCTTCA CAATTTTCTT ATGAATTGCA	9480
TGATGCTAGT GGTGCAGAAA ATTATCTCCT TACTGCAAAA GAAGACGCTG AGGATACAGA	9540
AGAAATCTTG CTTGTTTAG CCACTATTTA TCTGGAGCAG GAGCGTTATG AGGATATTCT	9600
AGAATTGCAG AGTGAGGAGC CAGAAAATCT TTTGACCAAG TGGATGATTG CTCGTCTT	9660
TCAAGAAATG GACGATTTGG ATACTGCTTA TGAGTATTAT CAAGAGTTGA CAGGAGATT	9720
GAAGGACAAT CCAGAATTC TGGAACTA TATCTATCTC TTGCGTGAAT TGGGACATT	9780

1043

TGAAGAAGCA AAAGTCCATG CTCACACTTA CTTAAAACTG GTTCCAGATG ATGTGCAAAT	9840
GCAAGAAGCTG TTTGAGAGAT TGTAAGAATG TTTAACCCTAA ATCATTTCATA CCTCTCTCAA	9900
CTAGATGTAA CTTACAAAAC CCCTGACCTC ATGAGCCACT TTCTTCCTCC TCATGAGGTC	9960
AGTTTACTT TCTGCTGTT CAGTATCGTT TTTCTCGCT AGATTTCCTC AAAAGGGCAG	10020
ACTCCTCCCT TGGTGCGTCA CACGATTTT TCATCTCGAC TGTCTTTAA TGCATCATTA	10080
ACGACGCTT TCTCTAGGT GGTTCATAAG GAACAGGAAG ATTCAGGTTG ACTTTTCTAA	10140
TCCTAGAATA AAGTGCTGAA AACAAATTCG AATAGGCATA GAGACTAGAC AATTTGAGGA	10200
GCTGCTTGGC TCCTGTTTGA ACACATTTTC CCACCACGTG AAGAAAAAGA TGGCGGAAGC	10260
GTTTGATTGT TAAAGTTGG AAGTCACCTC CAGCTAGATG TTTGAGAAAA AGATAGAGAT	10320
TGTAGGCGAT ACAGCTCATC ATCATACGAA TTCGTTTTG ATTAAGGTTG AACTATCCGT	10380
TTTATCGCCA AAAAATCGG	10399

(2) INFORMATION FOR SEQ ID NO: 161:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9409 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

GATAAGATTA AGTTAGAAAA GAAAGAACTA GGACATATCT ACCAGATTCA GGTTTTAAT	60
AGCTATGGGC AGGAAGAAAT CTATCGTGTG ATTTTGATGG AGACCAATAT TAGTTCGGTT	120
TCAACCAATA TCAAGTATGC TGCTGTCTTG ATTAATACCA GTCAGTTGGA ACAGGCTAGT	180
CAAAAGCATG AGCAATTGAT TGTGGTCGTG ATGGCTAGTT TCTGGATTTT GTCTTTACTT	240
GCCAGTCTCT ATCTAGCTAG GGTCAGTGT AGGCCCTGC TTGAGAGTAT GCAGAAGCAA	300
CAGTCTTTTG TGGAAATGC CAGTCATGAG TTACGAACTC CACTCGCAGT TTTGCAAAAT	360
CGCTTAGAGA CCCTTTTTCG TAAGCCAGAA GCTACCATTA TGGATGTGAG CGAAAGCATT	420
GCATCGAGTT TGGAAAGAAG CCGAAATATG CGTTTTTTAA CGACAAGCTT GCTGAACTTA	480
GCTCGGAGAG ATGATGGGAT TAAGCCGGAG CTTGCAGAAG TTCCAACCTAG CTTTTTTAAT	540
ACAACTTTCA CAACTACGA GATGATTGCT TCGGAAAATA ATCGTGTCTT CCGTTTTGAA	600
AATCGTATCC ATCGAACAAT TGTCACAGAT CAGCTTCTTC TGAAACAACT GATGACCATT	660
CTTTTCGATA ATGCCGTCAA GTATACTGAG GAGGATGGTG AAATTGATTT TCTTATCTCG	720

1044

GCGACCGATC	GCAATCTTTA	TTTACTTGTT	TCTGATAATG	GAATCGGTAT	TTGACAGAA	780
GATAAAAAGA	AAATTTTGA	CCGTTTTTAT	CGAGTAGACA	AGGCTAGAAC	CCGGCAAAAA	840
GGTGGTTTTG	GTTTAGGATT	ATCCCTAGCC	AAGCAAATTG	TAGATGCTCT	AAAAGGAACT	900
GTACTGTCA	AAGATAATAA	ACCCAAGGGA	ACAATCTTTG	AAGTGAAGAT	TGCCATTTCAG	960
ACACCATCTA	AAAAGAAAAA	ATAAAAATAT	CGCTCCAATT	GGGGCGATAT	TTTGGATTTA	1020
TCTTCTACGT	TTTCGTTTGA	TAATAGACCG	TTGAACTTTT	AAAACAAGTA	AGCTGAATCC	1080
GATTGCTGCG	GCAAAGGCAA	GAGCAGTTGA	TAATTTTAAT	GCTAAAAAGA	TAAAACTAAA	1140
GATAGCAATA	CAGATACAAA	AAACAGCGAT	ATTAATAAAA	AATAGGATTT	CCTTGAGATT	1200
GGCATCAGAT	TGCGCTTCAG	GTGTATAAGC	TTGGTAATGA	GGAAGCTGCT	GGTTTAATTC	1260
TTCTTGATAG	TCTACCTCAT	AGGATTGTAA	TTTTCTTACG	GGCATGATTC	TCTCCTTAAC	1320
AGTACATACC	TATTTTATCA	TTTTTTCGGC	AGAGAATTAT	TACAGAAAGG	TTACAAAAAG	1380
AATAAAGTCC	CTTTTCATT	TCAAAGCATG	GCTGATTTTG	GAGAAATGTG	GTATAATTTT	1440
TCTTATGGAA	AAGATTGTCA	TTACAGCAAC	TGCTGAAAGT	ATTGAACAAG	TTGAACAACT	1500
ACTCGAAGCT	GGCGTAGACC	GTATCTATGT	CGGTGAGAAA	GATTTTGGTC	TTCGTCTGCC	1560
AACGACCTTT	AGTTATGACC	AATTACGTGA	AATCGCTAAG	TTGGTTCATG	ATGCTGGTAA	1620
GGAATTGATC	GTTGCGGTCA	ATGCTCTCAT	GCACCAAGAT	ATGATGGACC	GTATCAAGCC	1680
TTTCTTAAAC	TTCTTGGAAG	AAATCAAGAC	AGACTATATT	ACGATTGGGG	ATGCAGGCGT	1740
CTTTTACGTA	GTTAACC GCG	ATGGTTATTC	ATTTAAGACC	ATCTACGATG	CTTCAACCAT	1800
GGTAACTAGC	AGTCGT CAGA	TTAACTTCTG	GGGACAAAAG	GCTGGCGCAT	CTGAGGCTGT	1860
TTTGGCGCGT	GAAATCCAT	CAGCTGAACT	TTTCAAAATG	CCAGAGATTT	TGGAAATTCC	1920
TGCTGAAGTT	TTGGTTTACG	GTGCTAGCGT	CATCCATCAT	TCTAAACGTC	CACTCTTGCA	1980
AAACTACTAT	AACTTTACAC	ATATCGATGA	TGAAAAGACG	CATAAACGTG	ACCTCTTCTT	2040
GGCTGAGCCA	AGTGATCCAG	AGAGCCACTA	TTCCATTTT	GAAGATAATC	ATGGGACCCA	2100
TATCTTTGCC	AACAATGACC	TTGATTTGAT	GATCAAATTA	ACAGAATTGG	TGGAGCATGG	2160
CTTTACTCGC	TGGAAACTAG	AAGGGCTCTA	CACTCCTGGT	CAGAACTTTG	TTGAGATTGC	2220
AAAACCTCTT	ATCCAAGCGC	GTAGCTTGAT	TCAAGAGGGC	AACTTTAGTC	ATGCTCAAGC	2280
CTTCTTGCTG	GATGAAGAAG	TTCGTAAACT	TCACCTAAA	AACCGTTTCC	TTGATACAGG	2340
ATTTTATGAC	TACGATCCTG	ACATGGTTAG	ATAAAATACA	TGATTCGTTG	AGAGAAGGAA	2400
GATGCAACA	TTTCTTCTCT	CAATTTTTCG	TATTTCTTCA	CTATTTTACA	AAAATCAGCA	2460
GGCTAGAATG	CTCTATTTCGA	TGGGATTTTT	AAGAAAAGTA	GTGTTCTTGA	GTTTGAAAAT	2520

1045

TATCCTATGT TTGCAGGTGC CAAATGGCCC TTTTTTTGGT ATAATTTTTT ATAATGAAAA	2580
CGATTGGTAA TCGCTATGTT GTGGTGGATT TAGAGGCAAC TAGCACAGGT AGTAAGGCTA	2640
AAATTATCCA AGTGGGAATT GTCGTGATTG AGGACGGAGA AATCGTCGAT CACTATACGA	2700
CGGATGTCAA TCCACATGAA CCCTTGGATG CTCATATCAA AGAACTGACA GGATTGACAG	2760
ACCAACGTCT GCGCAAGCA CCTGATTTTT CGCAAGTTGC CAGAAAAATA TTTGACTTGG	2820
TGGAGGATGG GATTTTGTGA GCCCATAATG TTCAGTTTGA TGCTAATCTC TTGGCGGAAA	2880
ATTTATTTTT TGAAGGCTAT GAGCTAAGAA ACCCTCGTGT TGATACGGTC GAATTGGCCC	2940
AGGTCTTTTT CCCTGAAGTG GAAAAATATA GCTTGCCGAT TTTGTGTCGA GAATTAGGAA	3000
TTCTCTTAA ACACGCACAC ACAGCCCTTT CAGATGCCCA AGCTACAGCA GAATTACTTC	3060
TTTTTTTACG GAAAAAGATG ACCCAGCTTC CTAAAGGTCT CTTGGAACGC TTGCTGGAAA	3120
TGGCTGACGC TCTCCTATAT GAGTCCTACC TGGTTATTGA GGAAACTTAT CGCAACCAAT	3180
CTATCCTGAG TTCTCCAGAC TTGGTCCAAG TTCAAGGTCT ATATTTTAAG AAAACGGAAG	3240
CTTCTCTGGA GCCACGAAAA CTATCTCAAG ACTTTTCTAA AAATATTTCT CTGTTGAACC	3300
TTGAAGTGAG GGAGGAACAA GAAAGTTTGT CTAAAGAGGT TGGCTTGCTA TTGAAAGATG	3360
AACCTGTCTC TCTGATTCAA GCGCCGACAG GGATTGGGAA AACCTATGGC TATCTCTTAC	3420
CCGCTTTATC TCAATCCAAA GAGCGACAAA TTGTTCTTAG TGTTCGACA AAGATTCTTC	3480
AAAATCAAAT CATGGAAGAA GAAGGTAAAC GCCTCAAGGA AGTGTTCCTAT ACAGATATTC	3540
ATAGCTTAAA GGGACCACAA AATTATCTGA AGTTGGATGC CTTTATCAT TCCTTGCAAG	3600
AAAATGATGA AAATCGCTTA TTTAGACGCT TTAATGCA AGTCTTGGTC TGGCTTACTG	3660
AGACAGAGAC AGGAGATTTG GATGAAATCG GGCAACTCTA CCGTTACCAA CATTTTCTAG	3720
CAGACCTTCG TCATGATGGG AATTATCAT CCCAGAGCTT ATTTGTGACG GAAGATTTTT	3780
GGAAACGTAG TCAAGAAAGG GCAGAGACTT GCAAGCTTTT AGTGACTAAT CATGCCTATC	3840
TCGTAACCAG ACTTGAAGAT AATCCTGAAT TTGTCAGTGA CCGTTTACTG ATTATTGATG	3900
AAGTCCAAAA GATTTTGTGA GCTCTAGAAA ATCTGCTTCA AGAGACCTAC GATATACAAT	3960
CTATTATCGA TTTAATTGAT AAGGCTTTAG TAGGAGAAGA AAACAGGGTT CAACAACGGA	4020
TACTAGAAAG TATTCGCTTT GAGTGTCTCT ACTTGATAGA ACAATTTTCT TCTGGCAAAT	4080
CTAGGAAAAA TATCTTAGAT TCTCTGGACA ATCTCCATCA GTATTTTCTCA GAATTGGAAG	4140
TAGAAGACTT TGATGAGCTG GTTCGCTATT TTACAGCTGA AGGTGATTAC TGGCTTGAAG	4200
TAACTGAAAC GAGTCAAAG AAAATTCAGA TTTCTTCTAC AAAATCAGGC CGTACTCTTC	4260

1046

TGTCCTCTTT ACTTCCTGAG AGTTGCCAAG TCTTGGGAGT ATCGGCTACT CTTGAGATTA	4320
GTCAGAGGGT TTCTTTGGCA GACCTTTTAG GCTATCCTGA AGCTAAATTT GTCAAGATTG	4380
AATCTCGGGG AAAACAGGAA CAAGAAGTGG TCATGGTCAA AGATTTCCCT CTGGTAACAG	4440
AAACCTCCTT AGAAGTCTAT GCCAGAGAGG TAGCTGCTTT ACTAGTGGAA ATTCAAGCTT	4500
TCCAGCAACC GATTTTGGTT CTCTTTACCG CTAAAGACAT GCTTCTAGCA GTATCGGATT	4560
TACTTACAGT TAGCCACTTG GCCCAGTATA AAAATGGGGA TGTTCATCAG CTAAAGAAAC	4620
GCTTTGAAAA AGGTGAACAA CAAATCTTGC TTGGTGACG AAGTTTCTGG GAGGGAGTTG	4680
ATTTTTC AAG CCATCCTTCT GTGATTCAAG TTGTACCGAG GCTTCCTTTC CAAAATCCTC	4740
AAGAACCCTT GACGAAAAAG ATTAATCAAG AACTGAATCA AGAAGGGAAA AATGCCTTTT	4800
ATGATTATCA ATTGCCAATG GCCATTATTC GTTTAAACA GGCTTTGGGA AGAAGTATGA	4860
GACGTGAATA CCAACGTTC TTAACCTTA TTTTGATAG GAGAATCGTC GGAAAACGAT	4920
ACGGCAAACA AATAGTAGCA TCTCTAGCAG AAGAAGCGAC TGTAAACC ATCTCTCGAT	4980
CCGAAGTTGA CGAGGCTATT GATAGATTTT TTAATGAGCT TTGATAAATA GTATTGTATG	5040
AAAGTATAAG GTTAGTATAT ATGAAACGTT CTCTCGACTC AAGAGTCGAT TACAGTTTGC	5100
TCTTGCCAGT ATTTTCTTA CTGGTCATCG GTGTGGTGGC TATCTATATA GCCGTAGTC	5160
ATGATTATCC CAATAATATT CTGCCATTT TAGGGCAGCA GGTCGCCTGG ATTGCCTTGG	5220
GGCTTGAT TGGTTTGTG GTCATGCTCT TTAATACAGA ATTTCTTGG AAGGTGACCC	5280
CCTTTCTATA TATTTAGGC TTGGGACTTA TGATCTTGCC GATTGTATTT TATAATCCAA	5340
GCTTAGTTGC ATCAACGGGT GCCAAAACT GGTATCAAT AAATGGAATT ACCCTATTC	5400
AACCGTCAGA ATTTATGAAG ATATCCTATA TCCTCATGTT GGCTCGTGC ATTGTCCAAT	5460
TTACAAAGAA ACATAAGGAA TGGAGACGCA CGGTTCCGCT GGACTTTTGG TTAATTTTCT	5520
GGATGATTCT CTTTACCATT CCAGTCCTAG TTCTTTTAGC ACTTCAAAGT GACTTGGGGA	5580
CGGCTTTGGT TTTTGTAGCC ATTTTCTCAG GAATCGTTTT ATTATCAGGG GTTCTTGGA	5640
AAATTATTAT CCCAGTATTT GTGACTGCTG TAACAGGAGT TGCTGTTTTT TTAGCTATCT	5700
TTATTAGCAA GGACGGACGA GCTTTTCTTC ACCAGATTGG AATGCCGACC TACCAAATTA	5760
ATCGGATTTT GGCTTGGCTC AATCCCTTGG AGTTTGCCCA AACAACTGACT TACCAGCAGG	5820
CTCAAGGGCA GATTGCCATT GGGAGTGGTG GCTTATTGG TCAGGGATTT AATGCTTCGA	5880
ATCTGCTTAT CCCAGTTCGA GAGTCAGATA TGATTTTAC GGTATTGCA GAAGATTTTG	5940
GCTTTATTGG CTCTGTCCTG GTTATTGCCC TCTATCTCAT GTTGATTAC CGTATGTTGA	6000
AGATTACTCT TAAATCAAAT AACCAGTTCT AACTTATAT TTCCACAGGT TTGATTATGA	6060

1047

TGTTGCTCTT CCACATCTTT GAGAATATCG GTGCTGTGAC TGGACTACTT CCTTTGACGG	6120
GGATTCCCTT GCCTTTCATT TCGCAAGGGG GATCAGCTAT TATCAGTAAT CTGATTGGTG	6180
TTGGTTTGCT TTTATCGATG AGTTACCAGA CTAATCTAGC TGAAGAAAAG AGCGGAAAAG	6240
TCCCATTCAA ACGGAAAAG GTTGTATTAA AACAAATTAA ATAAGGAGAA AATCATGGTA	6300
AAAGTAGCAG TTATATTAGC TCAGGGCTTT GAAGAAATTG AAGCCTTGAC AGTTGTAGAT	6360
GTCTTGCGTC GAGCCAATAT CACATGTGAT ATGGTTGGTT TTGAAGAGCA AGTAACGGGT	6420
TCGCATGCAA TCCAAGTAAG AGCAGATCAT GTCTTTGATG GAGATTTATC AGACTATGAT	6480
ATGATTGTTC TTCCTGGAGG TATGCCTGGT TCTGCACATT TACGTGATAA TCAGACCTTG	6540
ATTCAAGAAT TGCAAAGCTT CGAGCAAGAA GGAAGAAAC TAGCAGCCAT TTGTGCGGCA	6600
CCAATTGCCC TCAATCAAGC AGAGATATTG AAAAATAAGC GATACACTTG TTATGACGGC	6660
GTTCAAGAGC AAATCCTTGA TGGTCACTAC GTCAAGGAAA CAGTAGTGGT AGATGGTCAG	6720
TTGACAACCA GTCGGGTCC TTCAACAGCC CTTGCCTTTG CCTACGAGTT GGTGGAGCAA	6780
CTAGGAGGGG ACGCAGAGAG TTTACGAACA GGAATGCTCT ATCGAGATGT CTTTGGTAAA	6840
AATCAGTAAA ACGGGAGTTA TTCTCTCGTT TTTTATGTGG AAAACTCAGG GAAATCATCG	6900
CTTTTTTCAT AAAAAATGC TATAATGAAG GGTATGAAAT ATCAGGATTA CATCTGGGAT	6960
TTAGGTGGAA CTTTACTGGA TAATTATGAA ACTTCAACAG CTGCATTTGT TGAAACATTG	7020
GCACTGTATG GTATCACACA AGACCATGAC AGTGCTATC AAGCTTTAAA GGTTTCTACT	7080
CCTTTTGC GA TTGAGACATT CGCTCCCAAT TTAGAGAATT TTTTAGAAAA GTACAAGGAA	7140
AATGAAGCCA GAGAGCTTGA ACACCCGATT TTATTTGAAG GAGTTTCTGA CCTATTGGAA	7200
GACATTTCAA ATCAAGGTGG CCGTCATTTT TTGGTCTCTC ATCGAAATGA TCAGGTTTGT	7260
GAAATTTTAG AAAAAACCTC TATAGCAGCT TATTTTACAG AAGTGGTGAC TTCTAGCTCA	7320
GGCTTTAAGA GAAAGCCAAA TCCCGAATCC ATGCTTTATT TAAGAGAAAA GTATCAGATT	7380
AGCTCTGGTC TTGTCATTGG TGATCGGCCG ATTGATATCG AAGCAGGTCA AGCTGCAGGA	7440
CTTGATACCC ACTTGTTTAC CAGTATCGTG AATTTAAGAC AAGTATTAGA CATATAAGAA	7500
AAAGGAATAA GATGACAGAA GAAATCAAAA ATCTGCAGGC ACAGGATTAT GATGCCAGTC	7560
AAATTCAAGT TTTAGAGGGC TTAGAGGCTG TTCGTATGCG TCCAGGGATG TACATTGGAT	7620
CAACCTCAAA AGAAGGTCTT CACCATCTAG TCTGGGAAAT TGTTGATAAC TCAATTGACG	7680
AGGCCTTGGC AGGATTTGCC AGCCATATTC AAGTTTTTAT TGAGCCAGAT GATTTCGATTA	7740
CTGTTGTGGA TGATGGGCGT GGTATCCCAG TCGATATTCA GGAAAAACA GGCCGTCCTG	7800

1048

CTGTTGAGAC CGTCTTTACA GTCCTTCACG CTGGAGGAAA GTTCGGCGGT GGTGGATACA	7860
AGGTTTCAGG TGGTCTTCAC GGGGTGGGGT CGTCAGTAGT TAATGCCCTT TCCACTCAAT	7920
TAGACGTTCA TGTTACAAA AATGGTAAGA TTCATTACCA AGAATACCGT CGTGGTCATG	7980
TTGTCGCAGA TCTTGAAATA GTTGGAGATA CGGATAAAAC AGGAACAACCT GTTCACTTCA	8040
CACCGGACCC AAAAATCTTC ACTGAAACAA CAATCTTTGA TTTTGATAAA TTAAATAAAC	8100
GGATTCAAGA GTTGGCCTTT CTAAATCGCG GTCTTCAAAT TTCAATTACA GATAAGCGCC	8160
AAGGTTTGGG ACAAACCAAG CATTATCATT ATGAAGGTGG GATTGCTAGT TACGTTGAAT	8220
ATATCAACGA GAACAAGGAT GTAATCTTTG ATACACCAAT CTATACAGAC GGTGAGATGG	8280
ATGATATCAC AGTTGAGGTA GCCATGCAGT ACACAACCTGG TTACCATGAA AATGTCATGA	8340
GTTTCGCCAA TAATATTCAT ACCCATGAAG GTGGAACACA TGAACAAGGT TTCCGTACAG	8400
CCTTGACACG TGTATCAAC GATTATGCTC GTAAAAATAA GTTACTGAAA GACAATGAAG	8460
ATAATTTAAC AGGGGAAGAT GTTCGCGAAG GCTTAACTGC AGTTATCTCA GTTAAACACC	8520
CAATCCACA GTTTGAAGGA CAAACCAAGA CCAAAATTGGG AAATAGCGAA GTGGTCAAGA	8580
TTACCAATCG CCTCTTCAGT GAAGCTTTCT CCGATTTCCT CATGGAAAAT CCACAGATTG	8640
CCAAACGTAT CGTAGAAAA GGAATTTTGG CTGCCAAGGC TCGTGTGGCT GCCAAGCGTG	8700
CGCGTGAAGT CACACGTAAA AAATCTGGTT TGGAAATTTT CAACCTTCCA GGGAACTAG	8760
CAGACTGTTT TTCTAATAAC CCTGCTGAAA CAGAACTCTT CATCGTCGAA GGAGACTCAG	8820
CTGGTGGATC AGCCAAATCT GGTGTAACC GTGAGTTTCA GGCTATCCTT CCAATTCGCG	8880
GTAAGATTTT GAACGTTGAA AAAGCAAGTA TGGATAAGAT TCTAGCCAAC GAAGAAATTC	8940
GTAGTCTTTT CACAGCCATG GGAACAGGAT TTGGCGCAGA ATTTGATGTT TCGAAAGCCC	9000
GTTACCAAAA ACTCGTTTGT ATGACCGATG CCGATGTCGA TGGAGCCAC ATTCGTACCC	9060
TTCTTTTAAC CTTGATTAT CGTTATATGA AACCAATCCT AGAAGCTGGT TATGTTTATA	9120
TTGCCCAACC ACCAATCTAT GGTGTCAAGG TTGGAAGCGA GATTAAAGAA TATATCCAGC	9180
CGGTCGAGA TCAAGAAATC AAATCCAAG AAGCTTTAGC CCGTTATAGT GAAGGTCGTA	9240
CCAAACCGAC TATTCAGCGT TATAAGGGGC TAGGTGAAAT GGACGATCAT CAGCTGTGGG	9300
AAACAACCAT GGATCCCGAA CATCGCTTGA TGGCTAGAGT TTCTGTAGAT GATGTGCAGA	9360
AGCAGATAAA ATCTTTGATA TGTGATGGG GATCGAGTTG TCCTCGTCG	9409

(2) INFORMATION FOR SEQ ID NO: 162:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6415 base pairs
 - (B) TYPE: nucleic acid

1049

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

CCTGGGAAAG TCTTGAAAAT TATGATAGAA TGGTGGAAGG AAAAATTCAG GAGAGTAGTA	60
GTGACTCAAA ATGTTGAAAG TCTTCTCGTA TCCATTGTAA TCAGTGCATA CAATGAAGAA	120
AAATATCTGC CTGGTCTAAT TGAAGACTTA AAAAATCAAA CCTATCCTAA AGAGGATATT	180
GAAATTCTAT TTATAAATGC TATGTCCACA GATGGGACCA CAGCTATCAT TCAGCAATTT	240
ATAAAGGAAG ATACAGAGTT TAACTCAATT AGATTGTATA ACAATCCTAA GAAAAATCAA	300
GCTAGTGGTT TTAACCTGGG AGTTAAACAT TCTGTAGGGG ACCTTATTTT AAAAATTGAT	360
GCTCATTCAA AAGTTACTGA GACTTTTGTA ATGAACAATG TGGCTATTAT TCAACAAGGT	420

1050
CACGGATTAC TTGGCAGTTA ATCTACTCCA GACGCAAAAA AGGTAGTGGT GATGGAGAAC 1620
ACCGTCGGAC CTTCTTGATT GGTGCCGGTG ATGGTGGGGC TCTTTTATG GATAGTTACC 1680
AACATCCAAC CAGTGAATTA GAACTGGTCG GTATTTTGA TAAGGATTCT AAGAAAAAGG 1740
GTCAAAAAC TGGTGGTATT CCTGTTTGG GCTCTTATGA CAATCTGCCT GAATTAGCCA 1800
AACGCCATCA AATCGAGCGT GTCATCGTTG CGATTCCGTC GCTGGATCCG TCAGAATATG 1860
AGCGTATCTT GCAGATGTGT AATAAGCTGG GTGTCAAATG TTACAAGATG CCTAAGGTTG 1920
AAGCTCTCTT TCGCCGCTT GCGTACGAG GCGTCCGCTT GCGTCCGCTT GCGTCCGCTT

1051

TTGAGCTGCC CGCAGCTAGT TFCCTAGTTT GCTCTTTGAT TTTCATTGAG TATTACTTCA	3420
TTTTCTTCTG AAATGGAATT GTTACCCAGT CTATGCTATT GAAAATACGC CAAAACCTCT	3480
AAGGGTTTGT GAGCGATATA ATCAGGTTGA TAGTTTAGTA GATCTGCTTG CTCTCCAAAT	3540
CCCCAAGTGA TGGCCAATTT CTGAATACCT GTTTCTCGAG CTCCCAGCAT ATCAAACCTG	3600
GTATCTCCGA TGATGATGGC TTGTTCTGGT GCTAGTTGAT GTGTCTGCAA GGCTTGGTGA	3660
ATGACATCTG CCTTATGGGG TGCTTCAGGG CTAGAACCAT AAATGCCATC AAAGAAATGA	3720
TGGATTTCCA AGTTTTTTGC CATGTCTTGA GCAGTAGATG TATCCTTTGT CGTGGTGATG	3780
TAGAGTGGAT AACTGCTCGA TAACTCCTCA AGCAAGTCTA TAATCTGAGG AAAGAGTTGA	3840
GCTTCATAGA TGCCTTTTGC CTTATAGTAA GAACGATATA TCTGCACGGC TTCAGAAATT	3900
TGGTCTTTGG ACAGGCAGGT CGCAAACTA CTTTCGAGAG GTGGTCCCAT AAAACCACGA	3960
ATAGTTTTGG CATCAGGGCT AGGCACCCCC AGCTCTTTAA AGGTATAGGT AAAGGCATTG	4020
TGAATCCCGA TAGAACTATC AACGAGGGTT CCATCCAAAT CGAAAAAAT CGTGTGATA	4080
GAGGTCATGG TTTCTCCTAT TTGATAAGCT TATTCTCCGA AAATTCTTTT TTGGAGCGA	4140
CGACCAGTAG GGGTGGTAGC GAGTCCACCT TCAGCTGTTT CACGAAAGGC AGTTGGCATG	4200
CTTGCTCCTA CTTGGTACAT GGCATCGATC ACTTCATCCA CAGGGATTTT AGATTGCGATA	4260
CCTGCCAAGG CCATGTCTGC TGCATGAAA GCAAAGCTAG CTCCCATGGC ATTACGTTTG	4320
ACACAGGGAA CTTCGACCAA ACCTGCAACA GGGTCACAGA TGAGGCCTAG CATATTTTTA	4380
ATGACAAAGG CAATAGCTTG ACTGGCCTGA TAAGGTGTTT CACCTGCAGC CAGAGTCAAG	4440
GCGGCAGCAC TCATAGCAGA GGCTGAACCA ACTTCAGCTT GACACCCACC CTCAGCACCT	4500
GAGATGGAGG CATTGTTTGC GATGACTAGT CCAAAGGCAC CAGCAGCAAA GAGGAAATCC	4560
AATTGTTGCT CGTGGCTGAG GTCTAATTTT TCAATAGCAG CAGTGAGAAC GGATGGCAGA	4620
CAGCCAGCAC TTCCAGCGGT TGGAGTGGCA CAGACCAAGC CCATTTTGGC ATTGTGTTCA	4680
TTGACTGCGA TGGCATTTCTG GGCAGCCGAG AGAATCGTAT AATCTGACAG AGTTTTTCCG	4740
TTTTCGATGT AGTGATCCAA TTTGGCAGCA TCTCCACCTG TCAGGCCACT ACGAGATTTA	4800
TTTTCATTTGA GGCCAAGTTG GACAGAGGCT TTCATAACTT CCAGATTGCG TTCCATGAGA	4860
AGGAAGACTT CTTACGTTT CCGACCGGTC AATTCAAACCT CTGTTGTAAT CATGAGTTCT	4920
GCGACATTTT CTTGAAAGTC CAGATCTGCT TGCTCGACCA ATTCTTTGAT AGAATAAAAC	4980
ATGCTTCCTC CTATTTAAAG AAATGACAT TGTGGAGATG AGGGATTTTT CGAATTTCTT	5040
CGATAGCCTC ATCACAGTTG CGACTGTCAA CTTGATAAT CATAATGGCT TTTTCACCAG	5100

1052

CTTTTTCACG AGTGACATTC ATCTGGGCGA TATTGATACC ATAGCGGGAA AGCGCCTCTG	5160
TAACAAGGGC AATCATACCT GGAATATCTT GATGAACGAT GATGATAGTC GGTGTATTCA	5220
TATTGAGAGA GACGGCAAAA CCATTGAGTT CGGTACCTG AATATTTCCCT CCACCGATAG	5280
AAATACCAGT CACGCTGATG GTCTTGTGGG CATTTTAAAC AGTAATTTTA GTGGTGTAG	5340
GGTGAGGGGC ATTGCTGTCT TTCTGAATGG TCCAGACAAT CTTGATACCA CGCTTGTGGG	5400
CAATTTCCAG ACTATTTGGA ATTTTCAGGAT CATCTGTATC CATTCCTAAA ATACCTGCAA	5460
CAAGGGCTAG GTCTGTTCCG TGACCACGAT AGGTCTTGGC AAATGAGTTA AAAAGTTGGA	5520
ATTCAACTTC TGTGGAGTA TCATCAAAAA TGGAAGAGAC AATCTTCCCA ATACGAACAG	5580
CACCAGCGGT ATGGCTACTA GATGGGCCAA TCATAACTGG TCCGATGATA TCAAAGACAG	5640
ATTGAAAACG AAGTGATTTC ATCAGTTTCC CCTTATAAAA ATTCTTATCT CTATTATATC	5700
AAAGAATGAG GGGCTTGGCT TTAATTGTGG ATGAAAACCT TTCTAATACC TCAAATAGCA	5760
TAAAAATAGT ATCTTTTATG ACAAAAAACA CCTTATTTAG GGAAATAAAA AATAATTTTG	5820
TAATATTTCT ACATAAAAGT GTCAAGAAAC GGTAAATATTT AAAGGGTATG ATAGAACTAT	5880
AGAAAGAAGG AGAATTTTCG AATATGAAAT CAATAACTAA AAAGATTAAA GCAACTCTTG	5940
CAGGAGTAGC TGCCTTGTTC GCAGTATTTG CTCCATCATT TGTATCTGCT CAAGAATCAT	6000
CAACTTACAC TGTTAAAGAA GGTGATACAC TTTCAGAAAT CGCTGAACT CACAACACAA	6060
CAGTTGAAAA ATTGGCAGAA AACAACCACA TTGATAACAT TCATTTGATT TATGTTGATC	6120
AAGAGTTGGT TATCGATGGC CCTGTAGCGC CTGTTGCAAC ACCAGCGCCA GCTACTTATG	6180
CGGCACCAGC CGCTCAAGAT GAAACTGTTT CAGCTCCAGT AGCAGAACT CCAGTAGTAA	6240
GTGAAACAGT TGTTTCAACT GTAAGCGGAT CTGAAGCAGA AGCCAAAGAA TGGATCGCTC	6300
AAAAAGAATC AGGTGGTAGT ATACAGCTAC AAATGGACGT TATATCGGAC GTTACCAATT	6360
AACAGATTCA TACCTGAACG GTGACTACTC AGCTGAAAAA CAAGAACGGG TACCG	6415

(2) INFORMATION FOR SEQ ID NO: 163:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8494 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

TACCCCTTTC GAATTTTGGC AAAAATTCGG TAAGGCTTTG ATGGTAGTTA TCGCGGTAT	60
GCCGGCTGCT GGTTCATGA TTTCAATCGG TAAGTCTATC GTGATGATTA ACCCAACCTT	120

1053

TGCACCACTT GTCATCACAG GTGGAATTCT TGAGCAAATC GGTGGGGGG TTATCGGTAA	180
CCTTCACATT TTGTTTGCCC TAGCCATTGG AGGAAGCTGG GCTAAAGAAC GTGCTGGTGG	240
TGCTTTCGCC GCTGGTCTTG CCTTCATCTT GATTAAACCGT ATCACTGGTA CAATCTTTGG	300
TGTATCAGGC GATATGTTGA AAAATCCAGA TGCTATGGTA ACTACTTTCT TTGGTGGTTC	360
AATCAAAGTT GCTGATTACT TTATCAGTGT TCTTGAAGCT CCAGCCTTGA ACATGGGGGT	420
ATTTCGTAGG ATTATCTCAG GTTTTGTAGG GGCAACTGCT TACAACAAAT ACTACAACCT	480
CCGTAAACTT CCTGATGCAC TTTCATTCTT CAACGGGAAA CGTTTCGTAC CATTTGTAGT	540
TATTCTTCGT TCAGCAATCG CTGCAATTCT ACTTGCTGCT TTCTGGCCAG TAGTTCAAAC	600
AGGTATCAAT AACTTCGGTA TCTGGATTGC CAACTCACAA GAACTGCTC CAATTCCTGC	660
ACCATTCTTG TATGGTACTT TGAACGTTT GCTCTTGCCA TTGGTCTTC ACCACATGTT	720
GAATATCCCA ATGAATACA CAGCTCTTGG TGGTACTTAT GACATTTTAA CTGGTGCAGC	780
TAAAGGTACT CAAGTATTCG GTCAAGACCC ACTATGGCTT GCATGGGTAA CAGACCTTGT	840
AAACCTTAAA GGTACTGATG CTAGTCAATA TCAACACTTG TTAGATACAG TACATCCAGC	900
TCGTTTCAAA GTTGGACAAA TGATCGGTTC ATTCGGTATC TTGATGGGTG TGATTGTTGC	960
TATCTACCGT AATGTTGATG CTGACAAGAA ACATAAATAC AAAGGTATGA TGATTGCAAC	1020
AGCTCTTGCA ACATTCTTGA CAGGGGTAC TGAACCAATC GAATACATGT TCATGTTTAT	1080
CGCAACACCT ATGTATCTTG TTTACTCACT TGTTCAAGGT GCTGCCTTCG CTATGGCTGA	1140
CGTCGTAAAC CTACGTATGC ACTCATTGCG TTCAATCGAG TTCTTGACTC GTACACCTAT	1200
TGCAATCAGT GCTGGTATTG GTATGGATAT CGTTAACTTC GTTTGGGTAA CTGTTCTCTT	1260
TGCTGTAATC ATGTACTTTA TCGCAAACCT CATGATTCAA AAATTCAACT ACGCAACTCC	1320
AGGGCGCAAC GAAACTACG AACTGCTGA AGGTTTCAAG GAAACCAGCA GCGAAGTGAA	1380
AGTTGCAGCA GGCTCTCAAG CTGTAAACAT TATCAACCTT CTTGGTGGAC GTGTAAACAT	1440
CGTTGATGTT GATGCATGTA TGACTCGTCT TCGTGTAAT GTTAAAGATG CAGATAAAGT	1500
AGGAAATGCA GAGCAATGGA AAGCAGAAG AGCTATGGGT CTTGTCATGA AAGGACAAGG	1560
GGTTCAAGCT ATCTACGGTC CAAAAGCTGA CATTTTGAAA TCTGATATCC AAGATATCCT	1620
TGATTTCAGT GAAATCATTC CTGAAACTCT TCCAAGCCAA ATGACTGAAG CACAACAAAA	1680
CACTGTTCAc TTCAAAGATC TTACTGAGGA AGTTTACTCA GTAGCAGACG GTCAAGTTGT	1740
TGCTTTGGAA CAAGTAAAG ATCCAGTATT TGCTCAAAAA ATGATGGGTG ATGGATTTGC	1800
AGTAGAACCT GCAAATGGAA ACATTGTATC TCCAGTTTCA GGTACTGTGT CAAGCATCTT	1860

1054				
CCCAACAAAA	CATGCTTTTG	GTATTGTGAC	GGAAGCAGGT	CTTGAAGTAT TGGTTCACAT 1920
TGGTTTGGAC	ACAGTAAGTC	TTGAAGGTAA	ACCATTTTACA	GTTTCATGTTG CTGAAGGACA 1980
AAAAGTTGCA	GCAGGAGATC	TCCTTGTCAC	AGCTGACTTG	GATGCTATCC GTGCAGCAGG 2040
ACGTGAAACT	TCAACAGTAG	TTGTCTTCAC	AAATGGTGAT	GCAATTAAAT CAGTTAAGTT 2100
AGAAAAACA	GGTCTCTTG	CAGCTAAAAC	AGCAGTTGCT	AAAGTAGAAT TGTAAATATAC 2160
TTGAGGTTGG	AAGCTGTATT	CCAACCTCTT	ATTTTGGGAG	AAAAGAATGA AATTTTAAAC 2220
ACTCAATACT	CACAGTTGGA	TGGAGAAAGA	AGCAGAGGAA	AAATTCAGG TTTTGCTTGA 2280
AGATATCTCT	GAAAAGGACT	ATGATTGTAT	TTGTTTTCAA	GAAATCAATC AGGAGATGAC 2340
CTCGTCAGAG	GTGGAGGTTA	ATGACCTTTA	TCAAGCTTTG	CCAGCAGCTG AGCCTATTTCA 2400
CCAAGACCAT	TATGTTAGAC	TCTTGGTTGA	AAAGTTGTCT	GAGCAAGGGA AAAATTACTA 2460
CTGGACCTGG	GCCTATAACC	ATATCGGCTA	TAACCGCTAC	CACGAAGGTG TGGCTATCTT 2520
GTCTAAACA	CCTATTGAAG	CCAGAGAAAT	TTTGGTTTCA	GATGTGGATG ATCCAACAGA 2580
CTATCATACT	CGCCGTGTG	CCCTAGCTGA	AACTGTAGTC	GATGGCAAGG AGCTAGCAGT 2640
TGCCAGTGTT	CATCTCTCTT	GGTGGGATAA	AGGTTTCCAA	GAAGAATGGG CACGATTTGA 2700
GGCTGTCTTG	AAAAAATTGA	ACAAGCCACT	TTTACTAGCT	GGAGATTTCA ACAATCCGGC 2760
TGGACAGGAA	GGTTACCAAG	CTATTTTAGC	TAGTCCATTA	GGCTTACAAG ACGCATTTGA 2820
AGTTGCTCAA	GAGAAAAGTG	GTAGCTATAC	TGTTCCGCCT	GAAATTGATG GCTGGAAAGG 2880
GAACACTGAA	CCCCTTCGAA	TGATTATGT	CTTACTACC	AAAGAGTTAG CGGTGGAAAA 2940
TTTACATGTC	GTATTTGATG	GTAACAAGAG	TCCACAAGTG	AGTGATCACT ATGGCTTGAA 3000
TGCTATATTA	AACTGGAAAT	AATAACTGAA	AAGAGTTTGG	AACTATAAAA TTCCAGCCTT 3060
TTCTTACTAG	AGAAGCTACT	GGAAATAGCC	TAAATAAGTG	AGACTACTGT AATGGAATAA 3120
AATATGGTAT	AATTGATAAG	GTAGATAGAA	TCGAGGATGT	TATGTCAATT ACGAAATTTT 3180
AATTTAAAAA	CTATATTAGA	GAAGCCTTGA	AGGAGTTAAA	ATTTACAAC CCAACAGAGG 3240
TGCAAGACAA	GTTGATTCCCT	ATTGTTTTGG	CAGGTCGTGA	CCTAGTAGGA GAATCAAAAA 3300
CAGGTTCAAG	TAAGACTCAT	ACTTTCTTGT	TACCGATTTT	CCAGCAATTA GATGAAGCTA 3360
GCGATAGTGT	ACAAGCAGTG	ATTACTGCAC	CGAGTCGTGA	GTTGGCTACT CAAATTTACC 3420
AAGTAGCGCG	TCAGATTTCA	GCTCACTCAG	ATGTCGAAGT	TCGTGTGGTT AATTATGTGG 3480
GTGGTACGGA	TAAGGCTCGC	CAGATTGAGA	AATTGGCAAG	CAATCAGCCT CATATTGTTA 3540
TTGGAACACC	AGGCCGTATC	TACGACTTGG	TTAAATCTGG	TGATTTAGCT ATTCATAAAG 3600
CCAAGACATT	TGTTGTTGAT	GAAGCAGATA	TGACCTTGGA	TATGGGATTC TTGGAAACTG 3660

1055

TTGATAAGAT TGCTGGCAGT CTTCCAAAAG ACTTGCAATT CATGGTCTTC TCAGCGACTA	3720
TCCCACAAAA ACTGCAACCA TTCTTGAAAA AATACTTATC AAATCCTGTT ATGGAGAAAA	3780
TTAAGACCAA AACGGTTATT TCTGACACCA TTGATAATTG GTTGATTTTCG ACCAAGGGAC	3840
ATGATAAGAA TGCTCAAATT TACCAGTTGA CTCAGTTGAT GCAGCCGTAT TTGGCAATGA	3900
TTTTTGTTAA CACTAAAACG CGTGCTGATG AATTGCATTC ATATCTGACT GCTCAAGGCT	3960
TGAAGGTTGC AAAAATCCAT GGCGATATTG CCCCTCGTGA ACGCAAGCGA ATCATGAATC	4020
AGGTGCAAAA TCTGGATTTT GAGTATATTG TCGCAACAGA TTTGGCAGCG CGTGGGATTG	4080
ACATTGAAGG TGTCAGCCAT GTCATCAATG ATGCCATTCC GCAAGACTTA TCTTTTTTTG	4140
TTCATCGTGT TGGTCGFACT GGACGAAATG GCCTACCAGG TACAGCTATT ACCCTTTTATC	4200
AGCCAAGTGA TGA CTCGGAT ATCCGTGAGT TGGAGAAATT GGAATCAAG TTAGTCCTA	4260
AGATGGTCAA AGACGGGGAA TTTCAAGATA CCTATGACCG TGATCGTCGT GCCAACCCTG	4320
AGAAAAACA AGATAAACTT GATATCGAAA TGATTGGTTT GGTAAAAAG AAAAAGAAAA	4380
AAGTCAAACC GGGTTATAAG AAGAAAATC AATGGGCGGT TGATGAAAAG CGCCGTAAAA	4440
CCAAGCGTGC TGA AAAATCGC GCTCGCGGTC GTGCAGAGCG TAAAGCTAAA CGCCAAACAT	4500
TTTAATAGAA ATTGTTGGAG TATTGAGCTC CAACTTTTTT ATTTATGAGA ACGAACTATC	4560
TAAACCGAAA CACTACATTA AAGACTGCAA ATTGCGATTA AAAATGGTAT AATGATAAAG	4620
TTATATAGTC CCGATAAGAT GGTAGGTATT TATTACGAAG AGTTTTCCCTA TCAGTACTTT	4680
GTAACCTAT AACAAATTTT TTTAAGGGGG GACATTTTTA TGTCAGAGCG TAAATTATTC	4740
ACGTCTGAAT CTGTATCTGA GGGGCATCCG GATAAGATTG CAGACCAAAT TTCAGATGCG	4800
ATTTTGGATG CTATTTTAGC AAAGGATCCA GAGGCGCACG TTGCTGCTGA AACAGCTGTA	4860
TATACTGGTT CTGTCCACGT TTTTGGTGAA ATTTCTACAA ATGCCTATGT GGATATTAAC	4920
CGTGTGGTTC GTGATACCAT TGCAGAGATT GGTATACCA ATACAGAATA TGGATTTTCT	4980
GCTGAGACGG TGGGAGTACA CCCATCTTTG GTGGAACAAT CTCCTGACAT CGCTCAAGGT	5040
GTTAACGAAG CCTTGGAGGT TCGTGAAAT GCTGATCAAG ATCCACTGGA CTTGATTGGA	5100
GCAGGTGACC AAGGGCTCAT GTTTGGATTT GCAGTAGATG AAACAGAAGA GCTTATGCCA	5160
TTGCCAATTG CACTCAGTCA TAAATTGGTT CGTCGTCTGG CAGAACTTCG TAAGTCTGGA	5220
GAAATTAGCT ATCTCCGTCC AGATGCAAAA TCACAAGTTA CAGTTGAGTA CGATGAAAAT	5280
GACCGTCCGG TACGTGTAGA TACAGTCGTT ATTTCTACTC AGCATGATCC AGAGGCCACT	5340
AATGAACAAA TCCATCAAGA TGTGATTGAC AAGGTCATCA AAGAAGTTAT TCCATCTTCT	5400

1056

TATCTTGATG ATAAGACAAA ATTCTTTATC AATCCGACAG GTCGTTTGT AATCGGTGGT	5460
CCTCAAGGGG ACTCAGGTTT GACTGGTCGT AAGATTATG TAGATACTTA TGGTGGCTAC	5520
TCTCGTCATG GTGGTGGTGC CTTCTCTGGT AAAGATGCCA CTAAGGTGGA TCGTTCAGCC	5580
TCTTATGCGG CTCGCTATAT TGCCAAGAAT ATCGTTGCAG CAGACCTTGC TAAGAAGGCA	5640
GAAGTGCAGT TGGCCTATGC TATCGGTGTT GCGCAACCTG TTTCTGTTCC TATCGATACT	5700
TTTCGGTACAG GAACAGTAGC TGAAAGTCAA CTTGAAAAAG CGGCTCGTCA AATCTTTGAC	5760
CTTCGCCCTG CAGGGATTAT CCAAATGCTG GACCTCAAGC GTCCAATTTA CCGTCAAACA	5820
TCGGCTTACG GTCACATGGG ACGTACAGAT ATTGATCTTC CATGGGAACG TTTGGATAAG	5880
GTAGATGCTT TGAAAGAAGC AGTAAAATAA GATTTTAAGA GGGGAACGTC CTCTCTTTT	5940
TATAGTTTTT AACTATACTG GGATACTGTT CTGAAAATCC ATTTTGCGAA AGTAGAGATT	6000
TACATGTATA GTAGATTGAA ACTAGAATAG TACACCTCAA CTTCTAAAAC ATTGTTAGCA	6060
ATCAATTTGA CTGTCCTGAT CGATTCTCC TGTCTTGT TCAATTTACT ATATTTCTTT	6120
AAAAATGATA AAGGTTAAGA TTTCTCCTCG TAATAGATAA TCTTGGGGAT ATTTCAATCC	6180
AAAGTTTTAT TCGTTATCAC TTGACTATTG CAAGGTTTTT TAGAGCAACA GAGTCATGGA	6240
ATGGACTCAT GGTGAGATT TCTCCTTGMT GCTTGGACTT CATTCAAAAG TCTGTTACCC	6300
AAGCCTTGTT CAAACTTCTA ATACACTAGC TGTTTCCATA GCATGACTTC TGTACTAGAC	6360
TTTCTTTTCC GAATAAATAG ATAGAACCAC AGAATCTAGT AAACCTAGAA TTAAAATTAT	6420
GGTATAATAT TAGCAATAAA AGAAATCTGG AGGATTAGAA TCATGGTATC AACGAAAACA	6480
CAAATTGCTG GTTTTGAGTT TGACAATTGC TTGATGAATG CAGCAGGTGT GGCTTGATG	6540
ACGATAGAGG AGTTAGAAGA GGTCAAAAAC TCAGCGGCAG GAACCTTTGT TACTAAGACA	6600
GCGACCTTGG ACTTCCGTCA GGGGAATCCT GAGCCACGCT ACCAAGATGT TCCACTTGGT	6660
TCCATCAACT CTATGGGCTT GCCAAATAAT GGCTTAGACT ATTATTTGGA TTATCTTTTA	6720
GATTTGCAGG AAAAAGAGTC GAACCGAACT TTCTTCTTAT CTCTGGTCCG CATGTCCTCA	6780
GAGGAAACCC ATACTATTTT GAAAAAGTC CAAGAGAGTG ATTTTCGTGG TCTGACTGAG	6840
CTAAATCTTT CCTGTCCAAA TGTTCAGGT AAACCTCAGA TTGCCTATGA TTTTGAGACA	6900
ACAGACCGGA TTTTGGCAGA AGTGTGCT TACTTCACCA AACCTCTGG AATTAAATTG	6960
CCACCTTATT TTGATATTGT TCACTTTGAC CAAGCGGCAG CTATTTTCAA CAAATATCCG	7020
CTCAAGTTTG TCAACTGCGT TAACTCTATC GGAAACGGCC TCTATATAGA AGACGAATCT	7080
GTCGTTATTC GGCCTAAGAA TGGTTTTGGT GGAATTGGTG GAGAATACAT CAAACCGACT	7140
GCTTTAGCCA ATGTTACGCG CTTTTATCAA CGTTTAAATC CTCAAATCCA AATTATCGGA	7200

1057

ACAGGTGGCG TTCTGACTGG TCGAGATGCC TTTGAACACA TCCTCTGTGG AGCAAGTATG	7260
GTGCAGGTGG GAACGACCCT TCACAAAGAA GGCCTCAGTG CTTTGTACCG CATTACCAAT	7320
GAAC TGAAAG CAATCATGGT GGAAAAAGGC TACGAGAGCT TAGAAGATT T CCGTGGGAAA	7380
TTGCGCTATA TTGACTAAAT TAAATCGAAA AATCTGAAGA AAGGAGAGAC GATGCTAGCC	7440
ATTGAAGAAA GTCAGAAGTT GACTTTATCA AATTTACCGA GCCTGAGCCT ATTTACAGGG	7500
ACAGATCAGG GTCAGTTTGA AGTGATGAAG AGTCAAATGT TGAAACAGAT TGGGTATGAT	7560
TCTGCTGACC TCAACTTTGC CTACTTTGAT ATGAAAGAAG TAGTTTACAA GGATGTGGAA	7620
CTGGAGTTGG TCAGCCTTCC TTTCTTTGCG GATGAGAAAA TCGTGATATT AGATTATTTT	7680
ATGGATATCA CGACTGCTAA GAAACGCTTT TTGACAGATG ATGAGCTTAA GTCATTTGAG	7740
GAATACCTTG ACAATCCTTC TCCAACAACC AAGTTGATAA TCTTTGCAGA AGGAAAGCTG	7800
GATAGCAAAA GACGGTTAGT CAAATTACTT AAGCGTGATG CCAAGGCCTT CGATGCAGTA	7860
GAAGTAAAAG AACAAGAATT GCGCCAGTAC TTCCAAAAGT GGAGTCAGAA ACAAGGTCTG	7920
CAGTTTACCA ATCATTCTTT TGAAATCTC CTCATCAAGT CGGGGTTTCA ATTTAGCGAA	7980
ATCCAGAAAA ATCTTCTCTT TTTACAGTCC TATAAGGCGA ATTCTGTTAT TGAGGAAGAG	8040
GATATTGTTA ACGCAATTCC CAAGACTTGC AGGACAATAT TTTTGATTTA ACTCAGTTTA	8100
TTCTGACTAA AAAGATGGAT CAGGCGCGCG ATTTGGTGAG AGACTTGACC TTGCAAGGGG	8160
AAGATGAAAT CAAACTGATT GCAGTCATGC TGGGACAATT TCGGACTTTT ACTCAGGTGA	8220
AGATTTTGGC GGAGTCTGGC CAAACAGAAT CGCAGATTGC AAGTAGTTTA GGTAGTTATC	8280
TGGGACGTAA CCCAAATCCT TATCAAATCA AGTTTGCAAT AAGAGATTCG AGAGGACTTT	8340
CTTTGAGCTT TTTGAAGCAA GCTATTTCTT ATTTGATTGA GACAGACTAT CAGATTAAGA	8400
CAGGTCTTTA TGAAAAAGGT TTCCTTTTGT AAAAGGCACT CTTACAGATT GCTAGTCAGG	8460
TCAATTGACA TTTGTTGAAA CTACTAACCC GCGG	8494

(2) INFORMATION FOR SEQ ID NO: 164:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9707 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

CCGGTCAGTT CGTTCAGTAC AAGGAATCAT AATGAACGAT CAATCAGAAA AAAAGACTAG	60
---	----

1058			
AAAGAAGACT GTATGGATAA TCGACCAATT GGTTTTGG	ATTCGGGTGT	CGGGGCTTG	120
ACCGTTGTGC GCGAGCTCAT GCGCCAGCTT CCCCATGAAG	AAATCGTCTA	TATTGGAGAT	180
TCGGCGCGGG CGCCCTATGG CCCCCGTCCT GCTGAGCAAA	TTCTGTAATA	TACTTGGCAG	240
CTGGTCAACT TTCTCTTGAC CAAGGATGTC AAAATGATTG	TCATTGCTTG	TAACACTGCG	300
ACTGCGGTCG TCTGGGAAGA AATCAAGGCT CAACTAGATA	TTCTGTCTT	GGGTGTAATT	360
TTGCCAGGAG CTTGGGCAGC CATCAAGTCC AGTCAAGGTG	GGAAAATCGG	AGTGATTGGA	420
ACGCCCATGA CGGTACAATC AGACATATAC CGTCAGAAAA	TCCATGATCT	GGATCCCGAC	480
TTACAGGTGG AGAGCTTGGC CTGTCCCAAG TTTGCTCCCT	TGGTTGAGTC	AGGTGCCCTG	540
TCAACCAAGTG TTACCAAGAA GGTGGTCTAT GAAACCCTGC	GTCCCTTGGT	TGGAAAGGTG	600
GATAGCCTGA TTTTGGGCTG TACTCATTAT CCACTCCTTC	GCCCTATTAT	CCAAAATGTG	660
ATGGGGCCAA AGGTTTCAGCT CATCGATAGT GGGGCAGAGT	GCGTACGGGA	TATCTCAGTC	720
TTACTCAATT ATTTTGAAAT CAATCGTGGT CGCGATGCTG	GACCACTCCA	TCACCGTTTT	780
TACACAACAG CCAGTAGCCA AAGTTTGGCA CAAATTGGTG	AAGAATGGCT	GGAAAAAGAG	840
ATTCATGTGG AGCATGTAGA ATTATGACAA ATAAAAATTA	TGAATATAAG	GATGACCAGG	900
ACTGGTATGT TGGGTCTTAT AGTATTTTGG GTGGCGTTAA	CAGTTTGAGC	GACTATAAGA	960
CAGATTTTCC TCTGTTTGAA TTCTCCAAAA TATTGGAGA	TGAAGAGTAT	GGTTTCCCGC	1020
TTTCAGTTAC TGTTTACGC TATGGTTCTA TCTACCGTTT	GTTCTCCTTT	GTGGTAGACA	1080
TGCTTAATCA AGAAATGGGA CGAACTTGG AAGTTATTCA	ACGTATGGG	GCCCTGCTCT	1140
TGGTTGAAAA TGGGCAACTC TTGTATGTAG AATGTCCTAA	AGAAGGGGTC	AATGTTTCATG	1200
ATTTCTTTGA GACAAGCAAG GTCAGAGAAA CCTTGTGAT	TGCGACTCGT	AACGAAGGTA	1260
AAACCAAGGA ATCCGAGCT ATCTTTGATA AGTTAGGCTA	CGATGTGGAA	AATCTTAATG	1320
ACTACCCTGA CCTGCCTGAA GTAGCAGAAA CAGGTATGAC	CTTTGAAGAA	AATGCCCGCC	1380
TTAAGGCAGA AACCATTCTT CAATTAACGG GCAAGATGGT	TTTGGCAGAT	GATTCTGGTC	1440
TCAAAGTCGA TGTCTTGGT GGCTTACCAG GCGTCTGGTC	AGCTCGTTTC	GCAGGTGTGG	1500
GAGCAACTGA CCGTGAAAAT AATGCCAAAC TCTTGACGA	ATTGGCCATG	GTCTTTGAAC	1560
TCAAGGACCG CTCGGCTCAG TTCCACACAA CCTAGTCGT	AGCCAGCCCA	AATAAGGAAA	1620
GTTTAGTTGT TGAAGCAGAC TGGTCAGGTT ATATTAACTT	TGAACCTAAG	GGTGAAAATG	1680
GCTTTGGCTA TGATCCCCTC TTCCTGTAG GAGAAACAGG	TGAGTCATCA	GCTGAATTAA	1740
CCCTGGAAGA AAAAAATAGT CAATCTCACC GTGCCTTAGC	CGTTAAGAAA	CTTTTGGAGG	1800
TATTTCCATC ATGGCAAAGC AAACCATCAT TGTAATGAGC	GATTCCCATG	GCGATAGCTT	1860

1059

GATTGTGGAA GAAGTCCGTG ATCGCTATGT GGGCAAAGTC GATGCTGTTT TTCATAACGG	1920
CGATTCTGAA CTACGTCCGG ATTCTCCACT TTGGGAGGGC ATCCGCGTTG TTAAAGGGAA	1980
CATGGACTTC TACGCCGGCT ACCCAGAACG TCTGGTGACT GAGCTTGGTT CGACCAAGAT	2040
TATCCAAACT CATGGTCACT TGTTTGACAT CAATTTCAAC TTTCAAAAGT TGGACTACTG	2100
GGCTCAGGAG GAAGAGGCCG CTATCTGCCT CTATGGTCAC TTGCATGTGC CAAGTGCTTG	2160
GTTGGAAGGC AAGATCCTCT TTCTAAATCC AGGTTCTATC AGTCAACCAC GAGGTACCAT	2220
CAGAGAATGT CTCTATGCTC GTGTGGAGAT TGATGATAGT TACTTCAAAG TGGACTTTTT	2280
GACACGAGAT CACGAGGTGT ATCCAGGTTT GTCCAAGGAG TTAGCCGAT GATTGCCAAG	2340
GAGTTTGAGA CTTTCTTGTT GGGGCAGGAG GAACTTTTT TGACCCCTGC TAAAAATCTA	2400
GCTGTGTGA TTGATACCCA CAATGCGGAT CATGCGACCC TCTTGCTCAG TCAGATGACC	2460
TATACCCGTG TTCCCGTTGT GACAGATGAA AAACAGTTTG TTGGGACGAT TGGACTCAGA	2520
GATATTATGG CTTATCAGAT GGAGCATGAC TTGAGCCAAG AAATCATGGC GGATACGGAT	2580
ATCGTTTATA TGACAAAAAC GGACGTAGCG GTTGTTTTCG CTGATTTTAC CATTACGGAG	2640
GTCTTGACA AGCTAGTAGA TGAGTCCTT TACCGGTTG TGGATGCAGA GGGTATTTTC	2700
CAAGGGATTA TTACGCGCAA GTCCATCCTC AAGGCCGTTA ATGCCCTCTT GCATGACTTT	2760
AGTAAGGAAT ATGAGATTCG ATGCCAATGA GAGACAGGAT TTCAGCCTTT TTAGAGGAAA	2820
AGCAGGGCTT GTCTGTCAAT TCCAAGCAGT CCTATAAGTA TGATTGGAG CAATTTTATAG	2880
ACATGGTAGG TGAGCGGATT TCTGAGACCA GTCTCAAGAT TTACCAAGCC CAGCTAGCCA	2940
ATCTAAAAAT CAGCGCCAG AAGCGAAAGA TTTCGGCCTG TAACCAATTT CTATACTTTC	3000
TCTATCAAAA AGGAGAGGTG GACAGCTTTT ACCGCTTGA ATTAGCCAAA CAAGCTGAAA	3060
AGAAGACGGA AAAGCCAGAG ATTCTATACC TAGACTCTTT TTGGCAGGAA AGCGACCATC	3120
CAGAGGGCCG CTTGCTAGCG CTCTTAATCC TAGAAATGGG GCTCTTGCCC AGTGAGATTT	3180
TAGCCATCAA GGTGCGGAC ATCAATCTGG ATTTTCAGGT GTTGCGAATC AGCAAGGCTT	3240
CCCAACAGAG GATTGTCACC ATTCCACGG CCTTGCTTTC AGAATTGGAA CCCTTGATGG	3300
GGCAGACCTA TCTTTTGAA AGAGGAGAGA AACCCTATTC TCGTCAGTGG GCCTTTCGTC	3360
AGTTAGAATC TTTGTCAAG GAGAAAGGTT TTCCATCCTT ATCAGCTCAA GTCTTACGTG	3420
AACAGTTTAT TCTAAGACAA ATAGAAAACA AGGTCGATTT GTACGAAATT GCAAAAAAAT	3480
TAGGATTAAT AACAGTCCTG ACCTTAGAAA AATATAGATA ATGGATATTA AATTAAAAGA	3540
TTTTGAAGGA CCCCTGGACT TGCTCTTGCA TCTGGTTTCT AAGTACCAGA TGGATATCTA	3600

1060

CGATGTGCCC ATTACGGAAG TCATCGAACA GTATCTAGCC TATGTCTCAA CCCTGCAGGC	3660
CATGCGTCTG GAAGTGACGG GTGAGTACAT GGTCAATGGCT AGTCAGCTCA TGCTGATTAA	3720
GAGTCGTAAA CTCCTTCCGA AGGTAGCAGA AGTGACAGAC TTGGGGGATG ACCTGGAGCA	3780
GGACCTCCTC TCTCAAATCG AAGAATATCG CAAGTTCAAG CTCTTGGGTG AGCACTTGA	3840
AGCCAAGCAC CAAGAACGGG CCCAGTATTA TTCCAAAGCG CCGACAGAGT TGATTTACGA	3900
AGATGCGGAG CTTGTGCATG ACAAGACGAC CATTGACCTC TTTTGTACTT TTTCAAATAT	3960
CCTAGCCAAG AAAAAAGAGG AGTTTGACA AAATCACACG ACGATCTTGC GGGATGAGTA	4020
TAAGATTGAG GACATGATGA TTATCGTGAA AGAGTCCTTG ATTGGACGAG ATCAATTGCG	4080
CTTGCAGGAT TTGTTCAAGG AAGCCCAGAA TGTCCAAGAG GTCATCACCC TCTTTTGGC	4140
AACCTTAGAG TTAATCAAAA CCCAGGAGTT GATCCTCGTG CAAGAGGAGA GTTTTGGAGA	4200
TATCTATCTC ATGGAAAAGA AGGAAGAAAG TCAAGTGCCT CAAAGCTAGA CTTGATAGAG	4260
AGGAAAGATG AGTACTTTAG CAAAATAGA AGCGCTCTTG TTTGTAGCGG GTGAAGATGG	4320
GATTCGGGTC CGCCAGTTAG CTGAACCTCT CTCTCTGCCA CCGACAGGCA TCCAGCAAAG	4380
TTTAGGAAAA TTAGCCCAGA AGTATGAAAA GGACCCAGAT TCCAGTTTGG CTTTGATTGA	4440
GACAAGTGGT GCTTATAGAT TGGTGACCAA GCCTCAATTT GCAGAGATTT TGAAGGAATA	4500
CTCTAAGGCG CCTATCAACC AGAGCTTGTC TCGGGCTGCC CTTGAGACCT TGTCCATTAT	4560
TGCCTACAAA CAGCCGATTA CGCGGATAGA AATTGATGCC ATCCGTGGAG TTAACTCGAG	4620
TGGAGCCTTG GCAAAGTTGC AGGCTTTTGA CCTGATAAAG GAAGACGGGA AAAAGGAAGT	4680
ATTGGGGCGC CCCAACCTCT ATGTGACTAC GGATTATTTT CTAGATTACA TGGGGATAAA	4740
CCATTTAGAA GAATTACCAG TGATTGATGA GCTTGAGATT CAAGCCCAAG AAAGCCAATT	4800
ATTTGGTGAA AGGATAGAAG AAGATGAGAA TCAATAAGTA TATTGCCAC GCAGGTGTGG	4860
CCAGTAGGAG AAAAGCAGAA GAGCTGATTA AGCAAGGCTT GGTGACGGTT AACGGCCAAG	4920
TGGTGCGTGA ACTAGCAACC ACTATCAAGT CAGGCGACAA GGTGGAAGTT GAAGGTCAAC	4980
CTATCTACAA CGAAGAAAAG GTCTACTATC TGCTTAACAA ACCACGCGGT GTGATTTCCA	5040
GTGTGACAGA TGATAAGGGT CGCAAGACGG TTGTCGACCT CTTGCCCAAT GTCAAAGAGC	5100
GTATTTACCC TGTGGGTCGT TTGGACTGGG ATACATCAGG TGTCTTGATT TTGACCAATG	5160
ATGGGGACTT TACAGACGAG ATGATTCACC CTCGTAATGA GATTGACAAG GTTTATGTCG	5220
CGCGTGTTAA AGGTGTGGCC AATAAGGACA ATCTCCGCC CTTGACCCGT GGTCTTGAGA	5280
TTGATGGTAA GAAAACCAAG CCAGCTGTTT ATGAAATICT CAAAGTGGAC CCAGTCAAAA	5340
ATCGCTCTGT GGTGCAGTTG ACCATCCATG AAGGGCGTAA CCATCAGGTT AAAAAGATGT	5400

1061

TTGAAGCTGT TGGTCTCCAA GTAGATAAGT TGTCTCGGAC TCGTTTCGGA CACCTAGACT	5460
TGACAGGACT CCGTCCAGGA GAATCCCGTC GTCTTAATAA AAAAGAAATC AGCCAACTAC	5520
ACACCATGGC TGTAAC TAAG AAATAATGAA ACGAATTTTA ATAGCGCCTG TGCCTTTTA	5580
CCAACGTTTT ATCTCACCAG TCTTTCCACC CTCTTGTCGC TTTGAGCTGA CTTGTTCCTAA	5640
CTACATGATT CAGGCTATTG AAAACATGG GTTTAAGGGG GTATTGATGG GCTTGGCTCG	5700
GATTTTACGT TGTTCATCCCT GGTGCAAAAC AGGTAAGGAC CCCGTTCCAG ACCGCTTTTC	5760
CCTTAAACGA AATCAAGAAG GGGAAATGAGG TGGGGTAAAT AGATTTCAAA ATGATAAAAA	5820
CGCATCCTAT CAGGTTTGTAG TGAACCTGAT AGGATGCGTT TTAGAATGTC AAAATTTTAT	5880
ACTCTTCGAA AATCTCTTCA AACCGCGTCA GCTTTCATCT GCAACCTCAA AACAGTGTTT	5940
TGAGCAACCT GCGGCTAGTT TCCTAGTTTG CTCTTTGATT TTCATTGAGT ATTAAATTGA	6000
GTTTGAAGTG GCTTATTTCA AAGCTTTTGT TATGCTTCA ATCATGAGTT TTGTGTATTC	6060
AAGTCCGCCT CCGCTTAGAT ACCAGAGGTC TGGTGTAGT TGGATAATCT TACCATTTT	6120
AGCAGCAGGT GTTTCAGCGA TAAGGGCATT TTCTAGGACA CCGTCGTTGC TAGAGTTGTC	6180
CCCACCGATG GCAAGGGTAC GGTGATGAC AAAGAGGATG TCAGGGTTGA TTTCTTTGAC	6240
ACTTTCAAAG CTGACTTCTT GTCCGTGGCG TGAGTCTTCA AATTTTGATC CAGTTGGTTT	6300
GAATTTCAAG GTTTGGTACA AGAAAGAGAA ACGAGATTG GCACCAAAGG CTGCCATTTT	6360
TCCTTCATTA AGGAGGATCG CAAGGGCTTT TTTGTCAGAG CTTTCATTTT TAGTAGCGAC	6420
TTCTTGGATG CTCTTGCTCA GCTTGGTCAA TTCTTCCTTG GCTTTCTGTG TACCAGTTTC	6480
GCCGAAGGCA CTTGCTAAGG ATTCGATATT AGCCTTGGA GAAGTCCAGT AGTCGTCCTT	6540
GCTTGCTTGG AAGAGAACGG TTGGGGCGAT TTCTTTGAAT TTGTCTACGA ATTTTGTGT	6600
ACGTGGCGAA GCGATAATCA AATCAGGCTC AAGGGCGGCG ATAGCTTCTA AATCAGGTTC	6660
TTTCATAGAA CCAACATTTT TGACAGTTCC CACTAGGTCT TTTAGATAAG TCGGAACAGT	6720
TTTTGTAGGC ATTCGACGTA TATTTTTTTC AAATCCTAAA GCGCGAATAG TATCCGCAGC	6780
GCCGAGGTCA AAGGTCACAA TCTTTTCAGG AACTTTGGAA AGTTTGACCT CGTCCAGTGA	6840
ACTTTTAATG GTTACCTCTG TTGGAGCAGA GCTACTGGTC TCTGTCTGAC TAGTGCTTGA	6900
GTTTGTACTA CATGCACCAA GTAGGAGCAA GAAGCTGGCC ACTAGGGCAG TGAAATAAAG	6960
TTTAAGGGAT GTTTTCATAA TTTCTCCTTT TTAATAATGTG ATAACGATTT AGGGAGTCTC	7020
TTAATCTTAT TGACTAAGAG ACTGAAGGTT CTCTAACTTG AGCTTTTATG TTACTAGCTA	7080
TAGATACAGA TCTTTTGTG ATTGATATCA GCTAGCGTGA TGGGAATCTC ATAAAGTTGA	7140

1062

CTGAGCAGGT CAGCCTGCAT GATTTGATCG GTTCTTCCCT TGCTAAAGAC CTGGCCGTCC	7200
TTGAAGGCGA CAATTTCATC TGCATACTGA CTGGCCATGT TGATATCGTG GAGGACGATG	7260
ATAATGGTCT TGCCGAGTTC CTCCACCACT CGTCGAAGAA TCTGCATCAT GCTGACGCTT	7320
TGCTTGATAT CGAGATTGTT GAGTGGTTCG TCCAGCAAGA TAAAGTCCGT ATCCTGGGCC	7380
AGTACCATAG CGATAAAGAC GCGCTGGAGT TGCCCCCTG ACAGGCTATT GATGTAGCGG	7440
TCTTTTAAGT TGGTCAGTTC TAAATAGTTC AGAGTTTCTC GGATTTTTC CCAGTCTTCT	7500
GATCTAAGTC GACCTCGGCT GTAGGGAAAA CGTCCAAAAC TGACCAGTTC TTCAACAGTC	7560
AATTTGGCTT GGTAATTGAT TTTCTGTTTT AGGATGGTTA GTTCTTGGGC CAGTTCTTGC	7620
GAATTCCAGC TCTCGATTTC ACGTCCTTTG ATACTGAGAA CTCCCTGATC TTTCTTGGTT	7680
AGCCTGCTCA TGATGGAGAG GAGAGTCGAT TTTCCAGCAC CATTTGGACC AATAAAGGCT	7740
GTCAGTTTTT GAGGACTGAC TTCAAGCGAA ATGCCCTGCA AAATATCCTG TTTTGAATG	7800
GATTTGTCAA TGTTTCCAG TTCACTGAC GAGACCTCCT ATATAGTAAG ATAAAGAATA	7860
AGAAGCCACC CACACTCTCA ATGATCATAC TGATACGAAT TTCCAGTGCA AAGACTCGTT	7920
CAATCAAGGC TTGCCCCAAG GTTAAGCTAA TAAATCCAAC CAGAATGGCC ACTATAAAGA	7980
GTAACCTGTG CTGATAGTCT TTGACAATCA GGTAGGTGAG GTTGGCCAGT ATAAAGCCGA	8040
AGAAGGCCAT AGGTCCTACC AAGGCAGTGG CCGTTGAGGT CAAAAGCACG ATTCCCCAGA	8100
GGAGCTCTTT CTGTTCTTTT TCAACATCGA GTCCCAATAT CTGAGCCGTT TCTCTTTGCA	8160
GGTGCAAGAC ATCTAGAACG ACTGCTTTTC GAAAGAAAAA GATTGTCAA GCGAGGATGA	8220
TCAGAGAACC GATGGCTAGG ATGGAAGTGT TGAGATGTTG AAAGGAGGCA AAAAGACTAT	8280
TTTGCACTTT ATCGTATTCG TTTGGATCCA TTAGGACTTG AAGGAAGGTG CTGATATTTT	8340
GAAAGAGACT TCTGAGCGCT AGACAGATCA GCAGGACGAA GACCAGGTCT TGCTTCATCA	8400
GTGTCTTCAA GTAACCTTGT AAGGCGAGAA AGAAGAGGGA CTGGACAAGA AGTAAGACTA	8460
GGAATTCTAA GATAGGGGAT TTGCCAAGTT GAAGAACTT GCTTTCAAAA ACCAGTAGTA	8520
GGGTTTGTAG TAGGACGTAG AAGGATTCAA TTCCCAAAAT ACTAGGCGTC AGGAAGCGAT	8580
TTTCCGTCAG GGTTTGAAAA CTAATGGTCG AAATCCCACT CGCGATGGCT ACCAAGAGAT	8640
AAACGATGAT CTTTGGGAA CGCAACTTCC AAGCAAAGGC TGACAAGTGA GTGATGGGCC	8700
AAAAGTAGAG AAGACAAGCT CCGATGGCAA GAATAATGAG AATCCAGAAG AGCTTGGTAT	8760
GTTTGCTTTT AGTCTGCATC TTTTCGTCCC CCTCTCCAGA GAAGTAGGAT AAAGACGAGA	8820
CTACCGATGA TTCCTAGCAA GAGACTGACA GACAACTCAT AGGGCCTAAT CAGAACTCGG	8880
GATAGGATAT CGCAAGCCAG AACTAGATTG GCACCAACCA GTGCGACCAT GAGTTTGGTT	8940

1063

TGACTTAGAT TATCTCCATA GCGCTTGCGA ACAAGATTGG GAACGATAAC TCCGAGAAAT	9000
GGTAGGCCAC CCACGGTAAT CATGGTGACG CTTGTCGTTA GCGCCACCAG AAAGAGGGCC	9060
AGTTTTTCAA GTAGGGAGTA GGAAATCCCC AAACCTCTCGC TGGTTTCTTT CCCTAGATTC	9120
ATGATGGTGA AGGTTTGGA TAATTTCCAA ACGGTTATCA GGATGATGAG GCCTAAGAAG	9180
AGCCACTCAT ACTGATGGGT CTGAATCATG GAGAAGGAGC CCTGGGTCCA GGCAGTCATA	9240
CTCTGAACCA GATTGAAACG ATAGGCGATA ACTTCTGTGA CTGAGCCGAT AATCCCGCTA	9300
TAGATGATCC CAATCAGAGG CAACATCCAC CTTTCCTTTA CAGTAAAAAT GGTCAATAAG	9360
GCTAGGAAGA AGAGGGTGAA TACGATGGAT GAAACAAAAG CGAAGAGCAT CTTGTGGGTC	9420
AGACTAGCCG ATGGAAGAC AAAAAGGCTC AGCACCATTC CCAGTTTGGC GGCTTCAGTC	9480
GTTCCAAC TG TACTCGGTGC AGCAACTGA TTTTGGGTAA TAGTCTGCAT GAGAAGGCCT	9540
GCCATACTCA TACTAGAGGC AGTCAGGAGA ATACTGATAG TTCTTGGGAG ACGGGACTCT	9600
TGAAAGAGGA GCCAGGTCTG CTGGTCGAAA TCAATAGCT TTCCCATGA AAAATCACTG	9660
GTCCCAATGC TAATAGAGAG AAAGACTAGG AGTAGAAGTA AGCCAGG	9707

(2) INFORMATION FOR SEQ ID NO: 165:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 5910 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

CCGCAATTAT GCTTGAAAAG GAGTATACTT ATAAGTAACG CAAACGTTTG CGTCTGAAAA	60
ATACGCAACG TTCCATTATT TTAACACACG AGGTGCTATT ATGAAAAAAC GTCAAAGTGG	120
TGTGTTGATG CACATCTCTT CTCTCCAGG AGCTTACGGA ATCGGATCAT TTGGTCAAAG	180
TGCTTACGAC TTCGTTGATT TCTTGGTCCG TACAAAACAA CGTTACTGGC AAATCCTTCC	240
ATTAGGAGCA ACTAGTTACG GGGATTCTCC TTACCAATCT TTCTCAGCCT TCGCAGGAAA	300
CACTCATTTT ATCGATTTAG ATATCTTGGT GGAGCAAGGT TTGTTGGAAG CAAGTGACCT	360
TGAAGGAGTT GACTTTGGTA GCGATGCGTC TGAAGTTGAC TATGCTAAAA TCTACTATGC	420
ACGTCGTCCT CTTT TAGAAA AAGCGGTGAA ACGTTTCTTT GAAGTCGGAG ATGTTAAAGA	480
TTTTGAGAAA TTTGCTCAAG ACAACCAATC ATGGCTTGAG CTCCTTGCTG AGTATATGGC	540
TATCAAAGAG TATTTTGACA ATCTTGCTTG GACTGAATGG CCAGATGCAG ATGCTCGTGC	600

1064

TCGTAAAGCT TCAGCACTTG AAAGCTATCG TGAGCAATTG GCAGACAAGT TGGTTTACCA	660
CCGTGTGACT CAATACTTCT TCTTCCAACA ATGGTTGAAA TTGAAAGCTT ACGCTAACGA	720
CAACCACATC GAAATCGTTG GGGACATGCC AATCTACGTA GCGGAAGATT CAAGTGATAT	780
GTGGGCAAAAT CCACATCTCT TCAAAACAGA TGTCAATGGT AAGGCTACTT GTATCGCAGG	840
ATGCCCAACA GATGAGTTTT CTGTAACTGG TCAGCTTTGG GGTAAATCAA TCTATGACTG	900
GGAAGCAATG GACAAAGACG GCTACAAATG GTGGATTGAA CGCTTGCGTG AAAGCTTCAA	960
AATCTACGAT ATCGTTCGTA TCGACCACTT CCGTGGCTTC GAATCTTACT GGGAAATCCC	1020
TGCTGGTTCC GATACAGCAG CACCTGGTGA GTGGGTGAAA GGTCCAGGTT ACAAGCTTTT	1080
TGCAGCCGTT AAGGAAGAAC TTGGTGAGCT AAACATCATC GCAGAAGACC TTGGCTTCAT	1140
GACAGATGAA GTGATCGAAT TGGGTGAACG TACTGGCTTC CCAGGAATGA AGATTCTTCA	1200
ATTTGCCTTC AACCCAGAAG ACGAAAGCAT TGATAGCCCA CACTTGGCAC CTGCTAACTC	1260
AGTTATGTAC ACAGGAACAC ACGATAACAA TACGGTTCTT GGTGGGTACC GTAATGAGAT	1320
TGATGATGCG ACTCGTGAGT ACATGGCTCG TTACACGAAC CGTAAAGAAT ACGAAACAGT	1380
GGTACACGCT ATGCTTCGTA CAGTATTTTC ATCAGTTAGC TTTATGGCAA TTGCAACTAT	1440
GCAAGATTTA CTAGAATTGG ATGAGGCAGC TCGTATGAAC TTCCCATCTA CCCTTGGTGG	1500
AAACTGGTCT TGGCGTATGA CTGAAGATCA ATTGACACCA GCTGTCGAGG AAGGTTTGCT	1560
TGACTTGACA ACAATTTATC GCCGAATTAA TGAAAATTTG GTAGATTTAA AGAAATAAGA	1620
CAATAATCAG GAGACAACATA AACATGTTAT CACTACAAGA ATTTGTACAA AATCGTTACA	1680
ATAAAACCAT TGCAGAATGT AGCAATGAAG AGCTTTACCT TGCTCTTCTT AACTACAGCA	1740
AGCTTGCAAG CAGCCAAAAA CCAGTCAACA CTGGTAAGAA AAAAGTTTAC TACATCTCAG	1800
CTGAGTTCTT GATTGGTAAA CTCTTGTCOA ACAACTTGAT TAACCTTGGT CTTTACGACG	1860
ATGTTAAAAA AGAAGTTGCA GCTGCAGGTA AAGACTTGAT CGAAGTTGAA GAAGTTGAAT	1920
TGGAACCATC TCTTGGTAAT GGTGGTTTGG GACGTTTGGC TGCCTGCTTT ATCGACTCAA	1980
TTGCTACTCT TGGTTTGAAT GGTGACGGTG TTGGTCTTAA CTACCACTTT GGTCTTTTCC	2040
AACAAGTTCT TAAAAACAAC CAACAAGAAA CAATTCCAAA TGCATGGTTG ACAGAGCAAA	2100
ACTGGTTGGT TCGCTCAAGC CGTAGCTACC AAGTACCATT TGCAGACTTT ACTTTGACAT	2160
CAACTCTTTA CGATATTGAT GTTACTGGTT ATGAAACAGC GACTAAAAAC CGCTTGCGTT	2220
TGTTTGACTT GGATTCAGTT GATTCTTCTA TTATTAAAGA TGGTATCAAC TTTGACAAGA	2280
CAGATATCGC TCGCAACTTA ACTCTCTTCC TTTACCCAGA TGATAGTGAC CGTCAAGGTG	2340
AATGCTCCG TATCTTCCAA CAATACTTCA TGGTTTCAAA CGGTGCGCAA TTGATCATCG	2400

1065

ACGAAGCAAT CGAAAAAGGA AGCAACTTGC ATGACCTTGC TGACTACGCA GTTGTCCAAA	2460
TCAACGATAC TCACCCATCA ATGGTGATTC CTGAATTGAT TCGTCTTTTG ACTGCACGTG	2520
GTATCGATCT TGACGAAGCA ATCTCAATTG TTCGTAGCAT GACTGCCTAC ACTAACCACA	2580
CAATCCTTGC TGAAGCGCTT GAAAAATGGC CTCTTGAATT CTTGCAAGAA GTGGTTCCTC	2640
ACTTGGTACC AATCATCGAA GAATTGGACC GTCGTGTGAA GGCAGAGTAC AAAGATCCAG	2700
CTGTTCAAAT CATCGATGAG AGCGGACGTG TTCACATGGC TCACATGGAT ATCCACTACG	2760
GATACAGTGT TAACGGGGTT GCAGCACTCC ATACTGAAAT CTTGAAAAAT TCTGAGTTGA	2820
AAGCCTTCTA CGACCTTTAC CCAGAAAAGT TCAACAACAA AACAAACGGT ATCACTTTCC	2880
GTCGTTGGCT TATGCATGCT AACCCAAGAT TGTCTCACTA CTGGGATGAG ATTCTTGGAG	2940
ATGGTTGGCA CCATGAAGCA GATGAGCTTG AAAAAGCTTT GTCTTATGAA GACAAAGCAG	3000
TTGTCAAAGA AAAATTGGAA AGCATCAAGG CTCACAACAA ACGTAAATTG GCTCGTCACT	3060
TGAAAGAACA CCAAGGTGTG GAAATCAATC CAAATCTAT CTTTGATATC CAAATCAAAC	3120
GTCTTCACGA GTACAAACGC CAACAAATGA ACGCTTTGTA CGTGATCCAC AAATACCTTG	3180
ACATCAAAGC TGGTAACATC CCTGCTCGTC CAATCACAAT CTCTTTGGT GGTAAAGCAG	3240
CTCCAGCCTA CACAATCGCT CAAGACATTA TCCATTTAAT CCTTTCATG TCAGAAGTTA	3300
TTGCTAACGA TCCAGCAGTA GCTCCACACT TGCAAGTAGT TATGGTTGAA AACTACAACG	3360
TTACTGCAGC AAGTTTCCTT ATCCCAGCAT GTGATATCTC AGAACAAATC TCACTTGCTT	3420
CTAAAGAAGC TTCAGGTACT GGTAAATGA AATTCATGTT GAACGGAGCT TTGACACTTG	3480
GTACTATGGA CGGTGCTAAC GTGAAAATCG CTGAGTTGGT TGGAGAAGAA AACATCTACA	3540
TCTTCGGTGA AGATTCAGAA ACTGTTATCG ACCTTTACGC AAAAGCAGCT TACAAATCAA	3600
GCGAATTCTA CGCTCGTGAA GCTATCAAAC CATTGGTTGA CTTTCATCGTT AGTGATGCAG	3660
TTCTTGCAGC TGGAAACAAA GAGCGCTTGG AACGTTTTTA CAATGAATTG ATCAACAAAG	3720
ACTGGTTCAT GACTCTTCTT GATTTGGAAG ACTACATCAA AGTCAAAGAG CAAATGCTTG	3780
CTGACTACGA AGACCGTGAC GCATGGTTGG ATAAAGTCAT CGTTAACATT TCTAAAGCAG	3840
GATTCTTCTC ATCTGACCGT ACAATCGCTC AGTATAACGA AGACATCTGG CACTTGAAC	3900
AATACTCTTC GAAAATCTCT TCAAACCACG TCAGCTTTAT CTGCAACCTC AAAGCAGTGC	3960
TTTGAGCAAC TGC GGCTAGC TTCCTAGTTT GCTCTTTGAT TTTCATTGAG TATAAGATAC	4020
AAATTTATAC TAATACATTT TGTAAAAAG CGAGTTTCGA TTGAAATTCG CTTTTTTAAT	4080
GATGTAGATT TGGGTCAATC TTGTCTAAAA ATAGGGAAAT CCTAGATACA GTGAAGGCTT	4140

1066

TAAATGCTGG TTTTFACTGT CCTCAGCCTT ATATTTTTTC GTAGTTGGTT ACCTCATATC	4200
TATTATATTC GCTTACATAA AGTATTATAA TATAATTGTA GGAAAGAAGG TGTTTTATG	4260
ATATACACAC TTAAATTGGT GTTGTATTATT ACCTTCTTG TAATAAGCTT GTTACCTGAT	4320
AAGATTTTTC GAAAAATAA AAAAATTGG AAAATAGTTT TTGCAATATT GACGGCAGTG	4380
GCAGCATGT CATTTATGTA CTAAGTTATT TTAAGAATGT AGGGAAATAA ACCCTACATT	4440
CTTTTATGTT TTTTCTGTTT TCTAAATCT ATTTATCCAA GCGATTCAAC ATTTCTTGCT	4500
TCTTCGCTTC AAGTTCTGCA CGCTTTCTT CGATTCGGC ATGTTTTTTC TCGAGTTCAG	4560
AACAACCTGC ACCATTGCTA AATTCCTTTC GCCATCAGGA GATAGGGTGA GTCGACATGT	4620
CTATTACTCA CCCAAAGCAG TCCTACAAAG CAGGAATTTT CTGTTACTTT TTTGGAAATA	4680
GTAACGTTTA TACAGCTTTC AACTTCGTA TCAAAGCGCC AAACACACTC CGAGGGGTTT	4740
ACAGAAAGCA GAAAAGGAAT GATCTGGTAT AAGATCATTC CTTTTCyCTC TTTTCTTTA	4800
AGTAATTATA TACAATGTAC GACGAAGTCG TCATTGCAAT GCTGATCCAC CACCTAAAGG	4860
GAACCTTAAA CAACATTGAT AAGATAAAGA ATATAAACAA CGAAAATACG TTATACCCAA	4920
TTAATTTTAT TGTATATCTC ATGATTAAAA GTTAATCCTT CCGTTGTTAG GAATGGCATC	4980
ATTTTATATCC CATAATTGTG CTAAATAAGT CCCCCTGAT AATAAATTCA TAGCGAATTC	5040
TAAAGCAACA TCATTTACAA ACCAACTACC TAGATATCTA GAAATGCTG AACGAATAGC	5100
ACTTTTTCCT GCATGTTTTC CTTTACTTT AATTAGATTT GCAAGGCCTG CAGTAGTCC	5160
TCCTAATGCT AAAGCTATTG CAGTATCTAA TAGAGCACCC ATTTGATTAA CTGTAATACC	5220
TTGCCAAACT GCTCTAAATG GAGAGTATGT AGGTGGGATT GTATAATCGC CTTGTAATTG	5280
TCGGTTAATT ACTTCTTTGA TCCATTGTTG TGAGACGCTT GGATGAAAAG ATTGATTTC	5340
GTTTGCAAGT GTATTGATTT GTTCTTCTGT TAGAGAAGTG ACAGGTTGAA GTTCCATATT	5400
TGTTTCAATT TGTGATACTT GTTCAGAAGC GTATACAGCT GAAACACTTG GAATCGCTGA	5460
TACAATTAAC ACAATTGACG TCAAAAAAAC CGAAATAAAT TTCATTAAAT TGTTCATGAG	5520
CTTTCTCCT TTTTATTTGC ATCTGCTTAC ATTTTATCAT ATACTGTTAT TATAGTCAAA	5580
AAAATATGCT ATTATGTTAA AAAAATATTT TTCAAAATAT AAATGGACGG ATTTATTTTG	5640
GATTTTATTT GTTATTTTGA CCTGCCTCTA TATTGGTAAC CATGATTTGT TTACTCTCAA	5700
TCATCAAGAA TTCTCTTTTC GTGGTAGCGT TTGGGGCTG GTACTGGCCT TATATCACTT	5760
ACTATTCATT GATAAGTTTG TTATATCGAA TCGAAAATAA AGATTAGAGC TATGCTTGAC	5820
TGTGTACTTT TAGGATTTAT TTTGGAGGAA GATTTGTCT CTATTATTTA TTATTTTAAA	5880
TTTATTTATT TTGTATAAGA TCTATTCTTT	5910

1067

(2) INFORMATION FOR SEQ ID NO: 166:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 5406 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

GGCATAGCGA CTCATTTTTT CAACTGTCCA GGCTGGATAC CAGACTAATT TAACCTCAGT	60
ATCCGTTACT TCTGGAACCT CTATCATAGC ATCATAAATC TGGTCTGTCA AAAGGTCTGC	120
TAAGGGACAA CCCATAGTTG TCAAAGTCAT GTCAATCTCT GTTTGCCCTG TGTACCCGTC	180
AAAACGAATC TCATAGATCA AACCAAGATT GACAATATCG ATTCCCAACT CAGGGTCGAT	240
GACTTCTTCC AAGGCTGTTA AAATCCGTGT TTTGATGTTT TCAATTGCT CTTCTGTATA	300
AGCCATATTT TCCTCACTCT TAGTCTTCAA TAAATCACG AAGCGGTTTG CTACGACTTG	360
GTTGGCGTAG TTTTCTCAAA GCCTTTGCTT CAATCTGACG GATACGCTCA CGAGTTACGT	420
TAAAGACTTT CCCACATCT TCAAGTGTGC GCATTTTCC ATCATCTAGT CCAAAACGTA	480
GACGCAGAAC ATTTTCTTCA CGGTCTGTAA GAGTATCTAA GATTCATCC AATTGCTCAC	540
GCAAGACGAT ACGAGTCGTA TAATCCACTG GATTTTCAAT CACTTCATCT TCGATAAAGT	600
CTCCAAGGTG GCTATCGTCC TCTTCACCGA TAGGAGTTTC AAGAGATACT GGTCTTGGG	660
CAATCTTCAA GATTTACGA ACCTTATCAG GTGTCATATC CATTGCTTCA GCAATCTGTT	720
CTGGTGTCCG ATCTTGCCCC AATTCTTGAA GGAGATTCG CTGTTACGA ACCAATTTAT	780
TGATAGTTTC AACCATGTGA ACTGGGATAC GGATGGTACG AGCTTGGTCC GCAATAGCAC	840
GAGTGATAGC CTGACGAATC CACCAAGTTG CATAAGTTGA AAACCTGAAC CCTTTAGAAT	900
AGTCAAACTT GTCAACCGCC TTCATCAAGC CCATATTTCC TTCTTGAATC AAGTCAAGGA	960
ACTGCATACC ACGACCGACA TAGCGTTTGG CAATGGAAAC AACCAAACGA AGATTGGCTT	1020
CCGCAAGACG TTGTTTGGCT TCGATATCAC CAGCTTCAAC AGCCAGTGCC AACTCTTTCT	1080
CCTCTTCATT GGTCAAGAGA GGAACGACCC CTATTTCTTT CAAGTACATA CGGACAGGGT	1140
CATTGACCTT AGCAGAAGTT GACCCAATCA AGTCCTCATC GCTGAGTTCT GGTCTTCTT	1200
CATTGCTGAG AACACGCGCA CTTGGATTTC CTTGTTATC TGTGATAGAA ATGCCTGCAT	1260
CCTGAATCCG TTGCAAGAGA TCTTCAATCC CATCAGCGTC CAAGGTAAAA GGAATAACCA	1320
GACTTGCAAT GATTCATCA TCTGTGCTG TCCCTTTTGT CTTATGATTA CGGATAAATT	1380

1068

CTGCTACCTG	TACGTCAAAT	GTTGTTACTT	CTTTTGTGTT	TGTTGCCATT	ATTACTCCAT	1440
TCTTCTCTTT	TGGGAAATTA	AACGTTCCAA	TCTTCTAGG	GCTGTATCTG	TATCTCCTAC	1500
ATGGCTAGCT	TCCTGCACCT	TCTTTTGTAT	TCTCATATTG	TCCTGATTCA	AGAGAGCCTT	1560
GTTTCGAGTC	ATCTCTACTT	CACTAAGTTC	CTGCGGCGAT	ATCTCAGCAG	GCAAATCCTG	1620
AGCTAAAACT	TGGTACCAAG	CTCTTTCAAC	TTCTCTGTCT	TGCTCTGCTA	AAACTTCTGG	1680
AGGAAGATTT	CCATACTGGC	CAAGCAAGTC	ATATAAGACC	TGAAATTCAG	GTGTAGCAAA	1740
TGCAAAGTCT	TCTCGCAAAC	GGTAATCGTT	CAAAACAAGA	GGGGATTCCA	TCATCCGATA	1800
GAGTAGATGG	GCTTCTGCCC	TCATAATAGC	CGATAACTGC	TTGGTGACAG	GCATGGTGAT	1860
TGGCGTCGGT	CTGGAAATTC	CTTCCATGCG	ATTCTGCCTT	TGCACCTGAC	GACTCTCATT	1920
AACAATCTGC	TCAATCTGGG	TATAATCAAA	GGACGCCAGA	CTGTCAGCTA	AAATATGAAT	1980
ATAGCTGTTT	TGAGCAGCGA	TGGACTTTTC	TTGAACAATC	AAGGGAGCTA	TTTTTTCAAG	2040
AAACTCAATC	TGAGCCTGCA	GATTTTCACT	GTTTTCAAGT	TTGTACTGAT	GAATGTAGAA	2100
CTCAATCGGA	CTAATACGAG	TTTTCGTTAA	TAGATAGGCC	AAGTCTTCTG	GACCATTTTT	2160
TTGTAGATAC	TCATCAGGAT	CCAAGTTATC	AGGCATGCTG	ACGATTTGCA	CAGGCATATC	2220
ACCAATTTCA	TCCAATGCTT	TCAATGTCGC	GGCTTGCCCA	GCCTTATCTC	CATCGTAAAC	2280
AAGAACCAAT	TTCTTGGTTA	ACCTTTTCAG	ATGCTCAACA	TGCTCTCGAC	TCAAGGCTGT	2340
TCCCATCGAC	GCCACAGCAT	TTTCGATTCC	AGCCCGATAG	GCTGCAATAA	CATCCATGAA	2400
TCCTTCCATC	AGGTAAATCT	CACTAGCTTT	TCCAGAAGAT	CTTTTGTCCC	TATCCATATG	2460
ATATAATTCG	TAACTTTTGT	TAAAAATTGC	AGTCGATCGG	CTGTTTTTAT	ACTTAGAAGT	2520
TTGTGAATCC	GTTTTTTGCC	AGATACGACC	TGAGAAGGCA	ATGACCTTTC	CTTGGTCATT	2580
TGTCAGGGGA	AACATAATGC	GATTGTGAAA	GGTGTCTACA	AATTGATTGG	CATCCGAGAG	2640
ATAAACACAG	CCTGAATCCA	GTAATCCCTC	TTACAGATAC	TGATCAGACA	AACGTTGATA	2700
GAGATAGTTT	CGTTCTGGAG	GTGCTAAACC	AATCCAAAAA	TGTTTAAGCA	CTTCATCTGT	2760
CAACCCCGGC	TGATAAAGGT	AATTTCTGGC	CTCTTCGCCC	ATAGTCGTTG	TCATGAGAAT	2820
AGCATGGTAA	AATTTGGCTG	CATCTTCGTG	CATATCATAA	AGAGCTTGGT	GAGGTGAGGC	2880
TGACTTCTGC	TCACTATAAA	GCGGTTTTTC	AACCTCAATT	CCAACACGCT	GACCTAAGAT	2940
TTGGACTGCT	TCTATAAAGG	GAACCCCTTG	GTAATCCTCG	ATGAACTTAA	AGACATCACC	3000
TGAGCGACCA	CAACCGAAAC	AGTGATAAAA	CTGCTTGTCC	TCTACAACAT	TGAAAGATGG	3060
TGTTTTTTCA	CCATGAAAAG	GACAGAGCCC	TAGATAGTTC	CGTCCTGCCT	TTTGTAAGA	3120
AATCACATCT	CCTATGACTT	CCACAATGTT	GGCATTGTTT	TTGATTTCTT	CAATGACTTG	3180

1069

TTTGTCAACC ATACACAATA CCTCCATGTT ATCATAGTTT ACTTTATATA GTATACTTTA	3240
TTTCAGAAAA AAAGTAAACC ATTTCACTCA TTTTCCCTAC TTTATTCAAA GAGTTGATAA	3300
TAATCAGAGA TTTTCATTTT TGCTTTTCT TCTTGTTTA AATCTTGGAT AATTCGTCCT	3360
TCTTTTCATGA CAATCAAGCG ATTGCCGTAT TTGAGAGCAT CTTCCATATG ATGAGTAATC	3420
ATAAGGGCTG TTAGCTGATC TTTCTTAACA AATTCATCTG TCAATTCCAT CAAAGCAACA	3480
CTAGTCTTTG GATCCAGGGC AGCAGTATGC TCATCTAACA GGAGTAATTC AGGTCGCTTC	3540
AAGGTTGCCA TCAAGAGACT CAAAGCCTGT CTTTGTCCAC CTGATAAGAA CTCAATCGGT	3600
GTATTCAAGT GTTCTCAAG ACCATTTCTT ACTTTTTCAA TGGTTGCCTG AAATTCATCC	3660
TTATAGCTAG TCAAGCGTCG TGGTAACAAT CCACGCTTTT CACCACGAAA CTTGGCGATT	3720
AAAAGATTTT CAGCGACCGT CATACGGGGA GCTGTCCCA TCTTTGGATC TTGGAAGACA	3780
CGAGACAGGT ACTTGGCAGC CTTCTCGGT GAAACTTAG TGAGATCTTC ACCTAAAATA	3840
CGGATAGTTC CACTAGTTAG TGATAAGGTC CCTGCTATAG TGTAAAGAG AGTTGATTTT	3900
CCAGCACCAT TTCCGCCCAA AATCGTGATA AAGTCCCGTT CAAAAATTTC TAAGGAAACA	3960
TCATTTAAAA TAATCTTTT TTTATCAAG CCATTTTAA CGATTTTGGT TGCATTTTTT	4020
AATTCTACAA TTGCTGTCAT TTGCTTAACT TGGCTCCTTT CAAGATTGTT TGCTTAAATG	4080
TTGGAATCAT GAGGCAGACT GTTAAATCA AGGCACTGTA TAAACGAAG TAACCTGTAT	4140
TAAAGCCAAG TGCATAACT GCCCACACTA AAAATTGATA AGCGATAGAA CCTACAACGA	4200
TAGTAACCAA ACGCTCTGCC AAGCTCAAAC TCTTGAAAAT AACTTCTCCA ATAATCAAAC	4260
TTGCAAGCCC CACAACGATA ACCCCGATCC CTCGAGACAC ATCGGCATAA CCTTCTTGCT	4320
GAGCAATGAG GGCACCTGCA AGGGCAATCA CACCATTGTA TAAGACCAAG CCCATGAGCT	4380
CCATGCGTCC AGTATGAATC CCGAACTTC TAGCCATATC AGGATTATCC CCTGTAGCAA	4440
TATAGGCTTG TCCGAGTTTA GTGTCCAAGA AAAAGAGCAT GAGAGCAATA ACAATACTCA	4500
CAAAGATGAG ACCTGTCAAG AGTTGATTCA AATCCGAATC AAAAGGCAAA ACATCCTGAA	4560
TTTGCTTGGT TCCAAGCAGG CCTAAATTCG CACGTCCCAT AATCAAGAGC ATGATTGAGT	4620
GACAAGAAAT CATCACAAA ATCCCTGAGA GCAAGGTTGG GATCTTCCCT TTTGTATAAA	4680
GAAGGCCTGC TGCCATTCCA GCCAAACAAC CTGCTCCTAC AGCAACAAGT GTCGCTAAAA	4740
ATGGGTTTAC GCCTTTGGTT ATCAAAGTGA CAGCAACAGC TCCCCAAGA GGAAGGAAC	4800
CTTCTGTCGT CATATCTGGA AAGTTTAAAA TCCTAAATGT CATAAAGATT CCCAGACCTA	4860
GAATAGCCCA GACAAATCCT TGAGAAATAA TGGAAACAAT CATATTTTAT TTAATCCTTT	4920

1070

CTATATTCAT CTTTTTAAAA AATGGGAAGA GTCTCCTCCT CCCTACCTTA TTTATTCGAT	4980
GACTTGTCCT GCTTCTTTGA GAACAGACTC AGGAATAGTA ATACCTAGTT CTTGTGCTAT	5040
TTTTTTATTG ATGACTGACT TACCAGTTGA AAAGACATTG ACTGGGGTAT CGGCTGGTTT	5100
TGCACCTTTC AAGACTTGCA CAATCATTTT ACCTGTTGCC ACACCAAGGT CATGTTGGTC	5160
AATTACAAC TATGCCAAAC CACCTACTTC TACCATAGCT GTCGCACTGG GATAAATGCG	5220
TTTCTTAGAA CTTTGATTGC TAGAGACAAC CGTTGGAAAT CCTGATGCAA TGGTGTATATC	5280
AATTGGAACC CAAATAGCAT CTACCTTGCT AGTCATAACA GTGACAGTTG AGGCAATTTC	5340
ATTTGTTGAA GGAAGTCAA ATGTTTCCAC TGTCAGACCT GCCTTTTCAG CATAAGCCTT	5400
AAATTC	5406

(2) INFORMATION FOR SEQ ID NO: 167:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 9711 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

CAGCTTGCTC TTACTATTAT AGCAGATGTT ATAGCTGGAA TTATCTTGTA TTTCTGCTGC	60
AAATGGCTAG ATGGTAAGAA GTAGACCGAA TGAAGTACCT ATAAACACCC GTTAAATCGC	120
TAAGATACGT CAAAAAAGCC CTTAACTATG GCACTAGTTA GGGGCTTTGG TGTCTAATG	180
AACCTTATAC ACTAACTACA TTCTAGCATA TAAGCCGAGA TATTCAAGA GTTTTATTTA	240
TTGTTTAAAG TTCTGAAAGG TCTATAATGA AGTTAGCCAT CTAGTATCAA AAAACCGACT	300
AGCTCTTATG AACTAGTCGA TTTCTCATCA ATGCGCCAAC ATTTCTTGGG CGATTCTCTG	360
GCCAGATAGG TTATCTGGGT AGTAGGTGG CAGTTGTCC ATTTCTTCAA AGAGGGCTTC	420
TTGGCTTGTG CCTCCAAAGA AGATATGGAA ATGTTCTGCC TTAAGTGGG CAACATGTAG	480
GTCACATAAC TGAACATACT TGAATTGTCC AGCGTCAGCA TCTGTGGCTT CAAAGAGGAA	540
ACGCACGCCA CGATTGCCTT TCTTGTAAGT CAAAATTTTC TTACCGACAT ACTTGTAAAGT	600
GTATTTCTTG CTTGTCCAC CTTGAACAAA TTCCATAGTA TTATCAGTAA TGTTAATCTT	660
AGTCACATCT GTATGATAGC CTTTGTGATA GTAAGCCTTG TACTCAGCCT GGGTCATCTT	720
ACCAGTCAAC TTAGCCTTGT AGTCAAAGAC TTGGTCAAAC GTGCCGTCTT CAAGGAAAGG	780
ATAAAGTGAT TGCCAGTTAC CTGCATAGTC ACTCAAGGTG CGGTCCTTGA CAGCTGCATC	840
CTCGAAGTAA CCATTTTGA CTGTCTGGT ATCCTCTGCC TTTTCAGGTT CAATTGCTGG	900

1071

GCCTTCTTGG TCTGTTGTTT GTTTCAAAGC CTTGAGGTTT TTCTCCATCA CGGAAATGTA	960
GTTTTCCTCCA GCCTTGGTGT CCTCTTCTGT CAGACTTTCT AAAGGATTGA GGACATCAGT	1020
TTTGACACCT GCTTCCTTTG AAAGTGTGTT AGCAAGGGCT TGTGAGGCAT TTCTTCAAAA	1080
TAGATATAGG CGATTTTATT TTTCTTGACA TACTCTGTCA ATTCTGCCAA GCGAGCAGCT	1140
GATGGCTCTG CATCTGGAGA AAGTCCTGAG ATTGCGACTT GTTTGAGTCC ATAGTCCAAG	1200
GCAAGATAGT TAAAGGCTGC GTGTTGAGTC ACAAAGCTCT TTTGTTTTGC TTGAGACAAA	1260
CCTTCTGCGT AAGCCTTATC CAAGGCTTGC AATTTTTCGA TATAGGCAGC TGCATTCTTC	1320
TCAAAGGTCT CTTTTTTATC AGGATAATCT GCTGACAAGC TGTGCGGAT GTGCTCTACT	1380
AGTTTAATGG CACGAACTGG TGATAACCAA ACATGGGGGT CAAACTCATG GTGATGACCT	1440
TCTTCTCCAT GGTCAATGGT TCCCTCTTCT TCCTCGCCAC CTGGCAAGAG CAACATATCG	1500
CCTGTGCGCT TGATGGTTTT CACTTTTTTC TTATCCAAGG TATCTAGCAA TTTAGGTACC	1560
CATGTTTCCA TGTTTTCATT TTCATAAACG AAGGTATCTG CATCTTGGAT TTTGGCAACT	1620
GCCTTGGCAG ATGGTTCGTA TTCATGAGGT TCTGTCCCAG CACCGATTAG GAGTCTTACA	1680
TTAGCCGTAT CTCCTGCGAC TTGCTTGGA AATTCATAGA CAGGGTAAAA GGTGTGCACG	1740
ATATTGAGTT TACCATCTGC CTGTTTTGA TTGGAACAAG CCACTAAAA CAAGGCACAT	1800
AGACTGGCTA GTAATAAGCT AATTTTTTTC ACGTTCGTCT CCTATTGAT AAAACGTCTT	1860
ACTAACTGA TTAGTATAAA GACAGTTACA AAAATAATGG TAATACTTGC ACTTGCAGGT	1920
GTTTCTGCAT AGTAGGAAAT GTAAAGTCCT GCTACCATT CCAAAAAGCC AATCGCACTG	1980
GCAAGCAGCA TAACCGATT AAAGTTTTTC CCCAGACGCA GGGCAATACT AGCTGGCAAG	2040
ACCATAATGG TCGATACCAG AAGAGCTCCT GCTGCAGGAA TCATAAGGGC AATAGCCACC	2100
CCTGTCACCA TGTTAAAAAG AATGGACATG GTACGAACTG GCAAGCCATC CACAAAGGCC	2160
GTATCTTCGT CAAAAGTTAA GATATACATA GGACGAAGAA AGAGAAAGGT CAAAATCAAA	2220
ACAACCGCCG CAATGACAAA GAGGGAAATG ACCTGTTCTT CACTGATAGT CACGATCGAA	2280
CCAAAGAGAT ATTGGTCCAA ACTCATTGAA CTCGAGCTTT TACCCCTGCT CATGACAATC	2340
AGAGAAACAG CCAGACCTGT TGACATGAGG ATAGCTGTCC CGATTTCCAT AAAGCTCTTG	2400
TAAACCGTAC GGAGATACTC CAGAAAGACC GCCGCAATCA AGACAATGGC AATAGTAGAA	2460
ACAGTTGGAG AAATCCCCAA AACCAGACCA AAGGCTACAC CTGAAAGTGA GACGTGGCTA	2520
AGGGTATCAC TCATCAAACCT CTGACGACGC AAGATGAGGA AGGTTCCCAA TACCGGTGAG	2580
AAAAGACTCA TAGCAATAAC CGCCAAAAAG GCGCGTTGTA TAAAGTCGTA AGATAATAAA	2640

1072

CTAAGCATGG CCCACCTCCT GGCCATTCTC ATGAACATTG AAACAACGCC ATGGCGAGTC	2700
TTGGTTACGG ACTAGATGAA TATTGCGATC CGCATAATCC TTAACCTCTT CAGGGTCATG	2760
GGTAATCATC AAAACAGCCT TGCCATGATG ATGGGCGCTG TGGTGCAATG GTTCGTAAAA	2820
TTCATTTTTA CTTCCTGCAT CCATCCCCGT TGTCGGCTCG TCTAGGATAA ACACATCAGG	2880
GTCAGAAGCA AACATACGCG CAATTACCGC TCGCTGCTTT TGTCCCCCAG ATAGAGACCC	2940
CAAGCGTTTG TCTCGATGTT CCCACATGCC AACTGAGTCC AGACTAGCCT TGATATGCTC	3000
CTCATCATGA GCATTCAAAC GACGGAACCA GCCTTTTCTC GGATAGCGAC CCGACTTGAC	3060
AAATTCATAG ACCGTACTTG GAAAACCAGC ATTAAACTG GCAATTTGTT GAGGAAGATA	3120
GGCTATTCTC AATTTCTTAC CTGCGTATT TGCTTTTGAA ATAGCCACCT TTCCAATGCG	3180
TGGTTGCAGA ATTCCAAGAC TAGCCTTGAT GAGCGTCGTC TTAGCCGCTC CATTTTCCCC	3240
AGTCAAGGTA ACAAATTCCT CACTATCAAC ACAATAATTG ATATGTTCAA GAACAGGCTC	3300
CTTATCATAA TAGAAGGACA AATCCTCTAC CGTAATATAT CTCATTATTT GATTCTCTCT	3360
ACTAAAGCAG TCAAAAACCG CTGAATCACT TTTTGTTTAT TTGGAGTAAA CTGAGTCGCC	3420
ACTTGTTCAT AGGTAAAAAG TGTATGCTCA TGGTGATGGT GGTGCTCCTC AGCGATTGGA	3480
CGAGCCAAAGT CAGTCAACTG ATAAAAAATC ACACGCGCAT CTTTAGAATC TTTAGATGTT	3540
TCCAACATCC CTTCTTGAC CAAAGACTTA ATGGCCTTGG TAACTGCCGC CTGACTGACA	3600
TTGAGACGAC GGGCCAATTC TGAATTTGTT AAAGATTCTT CTGACAAGAG CATAAGGATA	3660
TGCTCCTGAG TATTGGTCAG GGCCACCTCG CTAGTGCAAT GACCTATTAG GATTTCATGC	3720
TGATTTTCCG CCTGCAAAAT CACCTCATTC AAAAAAGCAT TGATATCCTT TGCTAGCTGT	3780
CTCATATCTG ACTCCTTTCC TTTTAGACTT CTCTTTTTTA AGAGAAAAAT ACTATTCTTT	3840
GACATTTTGT TTACCAGTTA ATTATATCAC AAGCAAAAAA AGAGTCAAGA AAAAACGTGA	3900
AAACTAGTTT CATTCCTGAA CTCTTCTATA TTATATTATC TATTGAAATT CTTTGACATC	3960
TCCATCATAA GTCGCCCCAT CTTTGCTGAA AAAGCGCTCA TTCAGATGGT AAGTCGGAGC	4020
TGGTGTGGGA TTGGATAGGA AAGGATCAAC TGCCTTGTC AAGCCAACC AACCCAACCA	4080
ACCAAGGTGA ATGGTGTCTT TCATAAAGAA AGGCTCCCCG CCGTCTTAG AAAAATCTGC	4140
TATATTGGTA AAACCTTGAC TTTCTAACTG GTAGCGAATC TTCTGCACCG TTTGTTGGTA	4200
CATATCCTCT CGTAGACCAG CATAGTTCAT CCATTTTTTA TTAACAGGTG GAATGATAAA	4260
AATCGGGTTT ACCTTAGATT TAGAAAACTG TGTTAAAACC AACTGCAAGT CATTATACTC	4320
TGGCGACTTG AGATAGGTAA AGCTTTTCTG AGAATCCTTT AATTCTTCA AATCCTTCTT	4380
GATCTGCTCA TTATAGAAAT AATTTTCCAT TCCCATCTCA TTATTGGAAG TATTTTTTTC	4440